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# East Boston Centralized Land Use Information System

## Final Report To the CLUIS Subcommittee of

## The East Boston Planning and Zoning Advisory Committee

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Jeffrey Brown, Project Manager

Boston Redevelopment Authority
Policy Development and Research Department

Funded by the Massachusetts Port Authority

December 12, 1989

City of Boston
Raymond L. Flynn, Mayor

Boston Redevelopment Authority
Stephen Coyle, Director

Alexander Ganz, Assistant Director
Policy Development and Research

Massachusetts Port Authority
David W. Davis, Executive Director

Adel Foz, Director of Planning and Programming

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## CLUIS

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**ACKNOWLEDGEMENTS**

The East Boston Centralized Land Use Information System (CLUIS) project involved dozens of people over a twelve-month period.

The Massachusetts Port Authority provided funding for the project. Planners Bolfi Posadas and Bob Reyes and their Director of Planning and Programming, Adel Foz, put in many hours of review and assistance. Their attentiveness helped keep the project moving.

The CLUIS Subcommittee of the East Boston Planning and Zoning Advisory Committee met many times to review progress and offer advice on development of the system.

Consultants to the project were invaluable. John Bowen and Ray Hayes (Bowen & Hayes, Inc.) designed the data base with a thrust that got the project off to a good start. They maintained their contributions to and interest in the project throughout the twelve months. Simon Lewis pitched in with much needed energy and experience to propel the mapping element of the project. His comments on draft reports and his solutions to technical problems were instrumental in the completion of the system and this report.

The City Management Information System (MIS) staff contributed the bulk of the data for the project. Their efficiency go the project off to a good start. Matt Wilbert's technical know-how and insights were especially helpful to the CLUIS staff.

The team of CLUIS interns was efficient and dependable in carrying out a field survey and a business survey. Sarah Clarke, Ann Harrington, Cristal Metta, and Alvin Yuen completed the field survey work on time despite a late start to the project. Cristal and Ann continued with fine work on the business survey and the zoning files. David Jankowski showed persistence and skill in his work on the business survey, including the survey report.

The CLUIS staff at the Boston Redevelopment Authority deserve much credit for their problem solving and development of the system. Mary Bourgignon, before her departure for Seattle, did the difficult management work that got the project started. Without her well-defined work program, the staff would have lost valuable time early in the project. Bizhan Azad processed the extensive data files skillfully and put in long hours on PC ARC/INFO problems. Andrew Foley contributed greatly to the mapping segment of the project. Ann Voorhees updated the Zoning Board of Appeals files and worked hard to keep the CLUIS Committee involved with the project. In the last month of the project, Richard Henderson contributed much-needed editing of reports and testing of the system. Alex Ganz, Assistant Director for Policy Development and Research, gave the staff the needed time and encouragement to

complete the project.

Many BRA staff were helpful in the administrative elements of this unusual project, most notably, John Canavan, Ginny Yee, Kevin Lamb, Bob Arnold, Ron Salters, Ken Fields, and Frank Kelliher. Mark Bressler and Lori Schor contributed fine analysis on the legal aspects of the project.

BRA staff who deserve mention for their founding work include Gary Brown, Marc Older, John Avault, Brian Hebert, Julie Brown, and Mary Bourgignon.

Joe Ferreira, Director of the MIT Computer Resource Laboratory, and his staff contributed valued advice and support to the project.

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## EXECUTIVE SUMMARY

The East Boston Centralized Land Use Information System (CLUIS) is a desk-top geographic information system. For The City of Boston, it is the first connection of extensive parcel-based information and a parcel boundary file on a microcomputer. Most importantly, the system provides a powerful tool for community advisory groups and neighborhood planners. This tool provides (1) easy access to multiple files of land use information, (2) visual display of the information, and (3) numerous ways to graphically analyze data from more than one file.

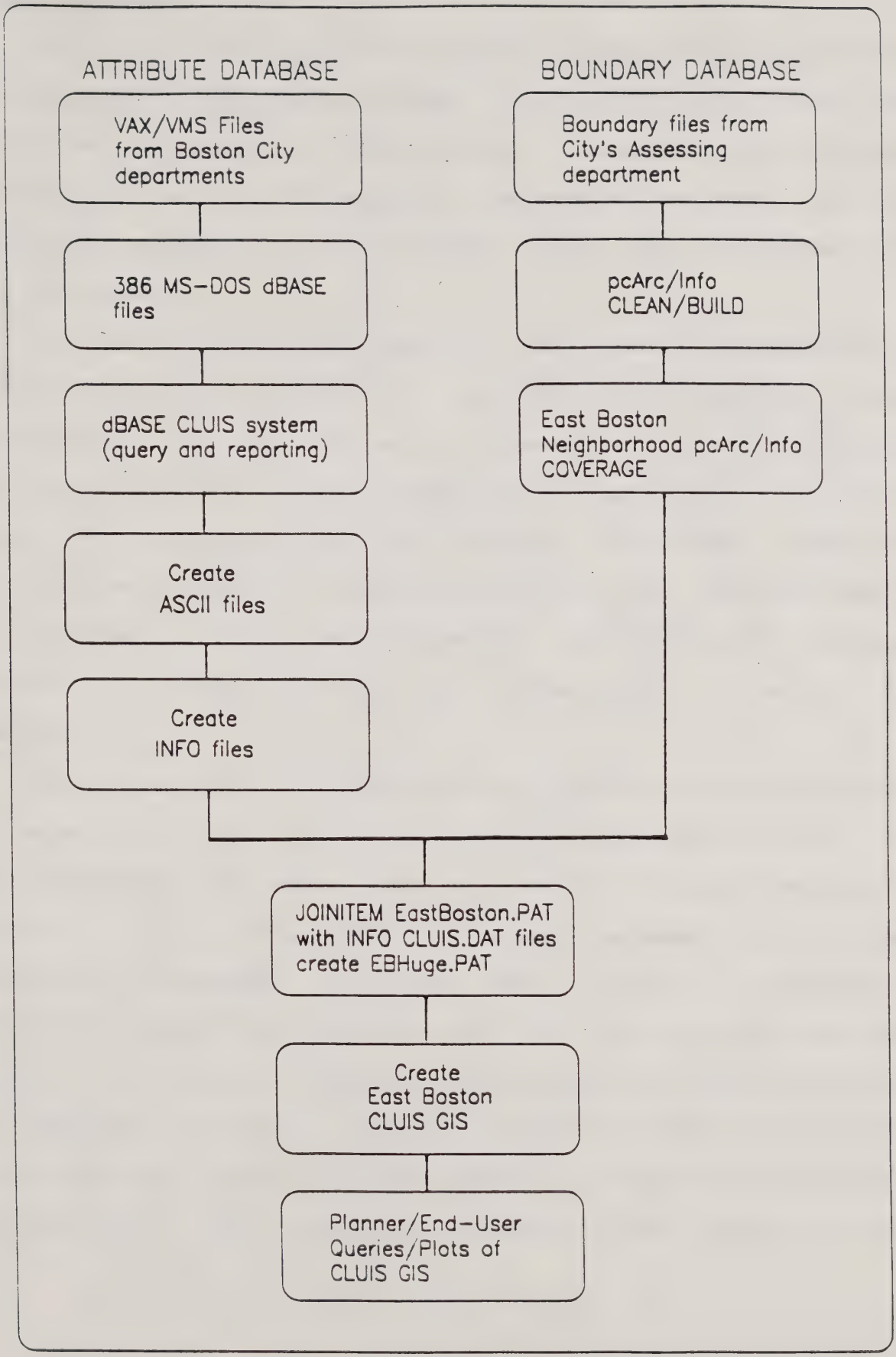
The CLUIS system has up to 100 items of information for each parcel, yet it has speed and flexibility. The system enables planners and community advisors to go beyond their street corner observations, site visits, conventional wisdom, and common sense. Through the CLUIS system, the planners and advisors can gain insight into neighborhood patterns, document perceived problems, and clearly present findings to city agencies. Further, the community can do "what if...?" analysis to anticipate problems or propose solutions to current land use conflicts.

The CLUIS system has two parts, as illustrated in the diagram below. One is a set of 13 data files collected from various City departments. All files have a common element: the parcel identification number. The other part of CLUIS is a geographic information system (GIS) using PC ARC/INFO. The GIS links the data files to the parcel geography of East Boston, processes information, and produces graphic displays.

The CLUIS project, funded by the Massachusetts Port Authority, was designed and implemented for the CLUIS subcommittee of the East Boston Planning and Zoning Advisory Committee as part of a project agreed upon by Massport and Air Impact Relief, Inc. As of August 1989, the system was in operation and being used for planning and rezoning in East Boston.

East Boston, one of Boston's 16 planning districts, had 33,600 residents in 1986. East Boston is a peninsula divided into 7,096 land parcels, most of which are residential. Non-residential uses are numerous along the waterfront and at major street intersections. Logan Airport, built in 1923 makes up about 60 percent of the land area of East Boston. Commercial activities are clustered in small business districts and on the periphery of the airport. Industrial land uses have diminished over time, and only a few marine-related businesses remain on the waterfront.

# ELEMENTS OF CLUIS GIS PROJECT


ATTRIBUTE DATABASE
VAX/VMS Files from Boston City departments
386 MS-DOS dBASE files
dBASE CLUIS system (query and reporting)
Create ASCII files
Create INFO files
BOUNDARY DATABASE
Boundary files from City's Assessing department
pcArc/Info CLEAN/BUILD
East Boston Neighborhood pcArc/Info COVERAGE
JOINITEM EastBoston.PAT with INFO CLUIS.DAT files create EBHuge.PAT
Create East Boston CLUIS GIS
Planner/End-User Queries/Plots of CLUIS GIS

## I. INTRODUCTION

The Centralized Land Use Information System (CLUIS) is a desk-top geographic information system. For Boston, it is the first connection of extensive parcel-based information and a parcel boundary file on a microcomputer. The system provides a tool for graphically analyzing multiple files of land use information from City departments.

The CLUIS project was pushed from theory to practice by Airport Impact Relief (AIR Inc.), an East Boston community group, who brought a law suit against the Massachusetts Port Authority, owner and operator of Logan Airport over expansion on Bird Island Flats. The settlement required Massport to conduct a land use study of East Boston. The parties agreed that the BRA would design and implement a land use information system under a one-year contract, including hardware and software for project. See Appendix 1.

The system is now in operation and ready for use in planning and rezoning in East Boston, and for other land use anlaysis. The CLUIS system has two parts. One is a set of 13 files formatted in dBASEIII. All files have a common element: the parcel identification number. The other part of CLUIS is a geographic information system (GIS) using PC ARC/INFO. The GIS links the data files to the geographic information and produces graphic displays. Two examples of graphic display follow. First, the Central Square/Eagle Hill section of East Boston is shown with residential parcels shaded. This excerpt of the actual plot lacks the color

shading used for different types of residential buildings. Second is a plot showing zoning district and street lines for the same area. This type of outline draws quickly and can serve as a base for shading of parcels according to their zoning district or other characteristics.

The CLUIS system is operating on equipment in the BRA Research Department. Consultants Bowen & Hayes Inc. have prepared computer screen access to the data files. Options include selection of a particular parcel, selection of a street or block, and creation of reports in print.

The City of Boston's Management Information System Department provided computerized parcel lines for East Boston. In the CLUIS system, PC ARC/INFO displays the lines, and attaches data to the parcels. The system will plot all or part of East Boston, showing selected characteristics such as land use, zoning, or structures.

This report has several parts. First, the field survey in East Boston is summarized, followed by a report on the business survey also conducted by the CLUIS staff. Then, Part IV discusses the issue of public access to information generated by the CLUIS system. Part V is a user manual for both the data base and mapping components of the system. The creation of the CLUIS data base and updating procedures are discussed in Part VI. The data documentation for the project is presented as Part VII, including a data dictionary and a description of the boundary file attached as appendices. Part VIII is an evaluation of the project. A budget report is attached also as Appendix 5.

## II. CLUIS FIELD SURVEY, AUGUST 1988

### The Field Inspection

The purpose of the field inspection was to verify land use information in the Assessor's parcel file, and to add information from observations on parking, airport-related businesses, and site condition.

The field inspection team consisted four interns working on foot in pairs, armed with maps and Assessor's parcel file printouts. The team looked at each parcel of land in a particular block, found the parcel on a planimetric map, found the record on the Assessor's printout, checked off correct information, marked down discrepancies and added observations. Data were entered into a dBASE file built from the Assessor's parcel file. Observed land uses were marked in color on a large parcel map of East Boston.

The field inspection covered all 6,831 parcels in the March 1988 Assessor's parcel file for East Boston. Note that the January 1989 parcel file had more records due to the increase in the number of condominiums which are each counted as a sub-parcel. Logan Airport is one parcel and one sub-parcel (Bird Island Flats). Piers, vacant land, and marshes are all one or more parcels. Streets are not labelled as parcels of land, but are included in Assessing Department maps. Each parcel has a unique 10-digit parcel identification number (PID). For example, a house lot would be one parcel of land. Parcels that are subdivided consist of a parcel and one or more sub-parcels. Sub-parcels are assigned PIDs which share the first seven digits in common with the original

parcel, and have 001, 002, 003, etc. as the last three digits.

The information in the field survey file included street address; site condition (rated by field inspector; see attached code sheet); land use (Assessor's codes with the exception of V for vacant land instead of RL, CL, or E in some cases); off-street parking (yes or no); number of off-street parking spaces; airport-related business on the parcel (yes or no); and names of each business on the parcel. The findings of the survey follow.

**Land Use Including Logan Airport**

East Boston's land use in August 1988 was dominated by exempt property in terms of area. Some of the exempt property is vacant; some includes structures such as government buildings, churches, schools, and airport facilities. Including Logan Airport, exempt property made up 79 percent of the East Boston land area, though exempt properties were only 6 percent of all parcels. Residential properties accounted for 72 percent of the parcels, but only 9 percent of the land area.

**Land Use Excluding Logan Airport**

Excluding Logan Airport, residential land uses accounted for 21 percent of the land area. Outside of the airport, exempt properties made up 47 percent of the land area, and commercial and industrial made up 22 percent of the total. Vacant land that was not exempt represented 9 percent of the area outside of the airport.

**Airport-related Parcels**

The field inspectors found 56 parcels with airport-related

businesses or vacant land on the border of Logan. The business survey two months later found several other airport-related businesses that were not visible on the street. Those 56 airport-related parcels made up 4.3 million square feet, or 6 percent of the land area outside of the airport.

**Parking**

Excluding Logan Airport, 534 East Boston parcels, or 8 percent of all parcels in the neighborhood, had one or more off-street parking spaces. Precinct 13 had 98 parcels with off-street parking, followed by Precinct 12 with 78 and Precinct 14 with 51. The total number of off-street parking spaces counted by the field inspectors amounted to 6,726. Precinct 13 had 23 percent of those spaces, and Precinct 2 had 18 percent. The mean number of parking spaces per parcel ranged from 42 in Precinct 2 to only two in Precinct 14.

**Exempt Properties**

Exempt properties outside of the airport were mostly owned by the Commonwealth of Massachusetts, 39 percent of the exempt area; the Metropolitan District Commission, 22 percent; the City of Boston Parks and Recreation Department, 7 percent; the Massachusetts Bay Transit Authority, 7 percent; and the Massachusetts Port Authority with 5 percent of the exempt area.

**Large Land Parcels With No Structures**

East Boston had 19 exempt parcels larger than 200,000 square feet, with no structures. Only two or three of those sites appeared to have potential for development of structures. The

field inspection file included 7 privately-owned vacant parcels larger than 200,000 square feet, most of which appeared to have some potential for development.

**Massport Parcels**

The Massachusetts Port Authority owned 98 parcels in East Boston, including Logan Airport. Most parcels were between 2,000 and 3,000 square feet and were clustered mostly on the waterfront or on the airport periphery. The streets addresses were primarily Neptune, Vienna, Moore, Marginal, Lovell, and Frankfort. Including Logan Airport, Massport owns 103 million square feet of land or 61 percent of the entire East Boston land area.

**Comparison of Assessor's Parcel File and Field Inspection**

Parcel land uses in the field inspection file differed from the land uses in the current Assessor's parcel file (January 1989) in 335 cases, or less than 5 percent of the parcels. The sources of the differences were (1) changes in land use between the time of the parcel file printout (March 1988) and the field inspection (July and August 1988); (2) errors or out-of-date information in the Assessor's file (3) errors in the field inspection. The latter included properties for which the boundaries and ownership were not obvious in the field. A list in Appendix 5 shows all properties for which the field inspection and the Assessor's file did not agree. See other printouts from the field survey in Appendix 5.

Jeff Brown, May 1989

## III. THE EAST BOSTON BUSINESS SURVEY

### Overview of Survey Method and Content

The business survey is a component of the Centralized Land Use Information Study (CLUIS) conducted by the BRA under the direction of Massport and the CLUIS Committee of the East Boston PZAC. The purpose of the survey was to identify trends and characteristics of airport-related and non-airport-related firms in the East Boston neighborhood, excluding Logan Airport.

The survey consisted of personal interviews or mail-in replies from 51 firms within the East Boston neighborhood, but outside the boundaries of Logan airport. Out of approximately 160 firms that were contacted by telephone, 37 were personally interviewed and 14 returned a survey in the mail. About 130 surveys were mailed. The interview/mail process was conducted from September 1988 to March 1989. Note that some of the 51 completed questionnaires did not have answers for all of the questions. The number of responses for particular questions are reported at the bottom of accompanying tables.

The survey contained questions on the firms' employment profile, history of operations, current facilities, future expansion/relocation plans, transportation, locational decisions, and customer profile. Twenty-one airport-related firms responded to the survey, and 30 non-airport-related firms responded. These two groups formed the major basis of comparison among the 51 firms surveyed. Freight forwarders comprised 65 percent of the sample of airport-related firms. The sample of non-airport-related firms

consisted of a wide variety of industries, including apparel manufacturers and auto service enterprises.

## Historical Trends of the East Boston Neighborhood Economy

Transportation has always been a major part of East Boston's economic development. From the mid-1800s to the 1910s, the neighborhood was an industrial and shipping center, providing a convenient location for transferring goods from ships to trains. During the first half of this century, the manufacturing sector grew in East Boston and attracted a large blue collar population to the neighborhood. The industries represented by the manufacturing firms included wood products, apparel, electrical equipment, and ship building/repair. The tremendous growth in the size and use of Logan Airport after World War II and the decline of manufacturing in East Boston changed the focus of the neighborhood's economy toward air transport and related services.

Until 1967, East Boston's economy was dominated by manufacturing firms, which provided about 4,300 jobs in that year. From 1967 to 1988, the manufacturing sector declined, while air transportation at Logan Airport became the major source of employment growth in East Boston. Specifically, manufacturing employment dropped from 4,300 in 1967 to 2,800 in 1983, and air transport employment increased from 5,000 jobs in 1967 to over 11,000 in 1983. Overall, the neighborhood contained 19,222 jobs in 672 firms in 1985. See Table 1.1.

An outcome of Logan Airport's increased use has been an expansion of the size and number of airport-related firms located

in the East Boston neighborhood, but outside the airport's boundaries. The business survey was conducted to gain an understanding of this segment of East Boston's economic development. The following sections present the findings of the survey.

**Employment Growth**

The surveyed firms represent 1,417 employees, 40 percent of which, or 570, work for the 21 airport-related firms in the survey. Only 35 of the 51 firms were in business in 1983, but their employment grew from 871 in 1983 to 1,259 in 1988. See Table 2.1.

**Firm Size**

The average size of an airport-related firm in East Boston is about 26 employees, slightly smaller than the average size of all firms in the neighborhood, which is approximately 28 employees.

**Occupation**

Most of the airport-related firms' personnel tend to be professional/sales workers (31 percent), or in service/operative positions (40 percent). The other firms' employees are mainly crafts workers (41 percent) such as mechanics or apparel workers. Operatives (20 percent) and professionals (13 percent) account for most of the remaining employees in the other firms. See Table 2.2.

**Income**

Forty-two percent of airport-related employees earn annual incomes in the $15,000 to $25,000 bracket. The majority of employees of other firms in the survey divide fairly evenly in the $10,000 to $15,000 range (28 percent) and the $25,000 to $40,000

Table 1.1. Employment in the East Boston Business Survey Compared to Employment in Census Counts

| Transportation Services | CLUIS Survey | County Business Patterns, 1985 |
|---|---|---|
| Number of Firms | 21 | 33 |
| Number of Employees | 570 | 815 |
| Employees Per Firm | 27.1 | 24.7 |
| **All Business Types** | | |
| Number of Firms | 51 | 672 |
| Number of Employees | 1,417 | 19,222 |
| Employees Per Firm | 27.8 | 28.6 |

Sources: East Boston CLUIS Survey; U.S. Bureau of the Census
County Business Patterns by Zip Code, unpublished fi

Table 2.1. Employment in East Boston Businesses, 1983 and 1988.

| 1983 Employees | Type of Business: Airport-Related | Other Types | All Types |
|---|---|---|---|
| Full-time | 339 | 471 | 810 |
| Part-time | 36 | 25 | 61 |
| Total | 375 | 496 | 871 |

| 1988 Employees | Type of Business: Airport-Related | Other Types | All Types |
|---|---|---|---|
| Full-time | 489 | 821 | 1,310 |
| Part-time | 81 | 39 | 120 |
| Total | 570 | 860 | 1,430 |

Source: East Boston CLUIS Survey, 1988.
Based on 51 responses.

Table 2.2. Occupation of Employees in East Boston Businesses,

| Percent of Employees in Occupation: | Occupation in Percent By Type of Business: Airport-Related | Other Types | All Types |
|---|---|---|---|
| Professional | 16 | 15 | 15 |
| Sales | 18 | 2 | 9 |
| Secretarial | 12 | 6 | 8 |
| Crafts | 3 | 46 | 28 |
| Operatives | 29 | 23 | 25 |
| Services | 15 | 2 | 7 |
| Labor | 7 | 6 | 6 |
| Total | 100 | 100 | 100 |

Source: East Boston CLUIS Survey, 1988.
Based on 51 responses.
Percentages may not sum to 100 due to rounding.

Table 2.3. Income of Employees in East Boston Businesses, 1988.

| Percent of Employees With Income: | By Type of Business: Airport-Related | Other Types | All Types |
|---|---|---|---|
| Less than 10,000 | 1 | 3 | 2 |
| 10,000 - 14,999 | 14 | 37 | 27 |
| 15,000 - 24,999 | 51 | 18 | 32 |
| 25,000 - 39,999 | 20 | 30 | 26 |
| Over 40,000 | 13 | 14 | 14 |
| Total | 100 | 100 | 100 |

Source: East Boston CLUIS Survey, 1988.
Based on 50 responses.
Percentages may not sum to 100 due to rounding.

Table 2.4. Place of Residence of Employees in East Boston Businesses, 1988.

| Percent of Employees Living In: | By Type of Business: Airport-Related | Other Types | All Types |
|---|---|---|---|
| East Boston | 45 | 24 | 35 |
| Other Boston | 6 | 10 | 8 |
| Withrop/Revere | 16 | 13 | 14 |
| Chelsea/Medford/Everett | 8 | 14 | 11 |
| North Shore | 17 | 17 | 17 |
| Other Suburbs | 7 | 17 | 12 |
| Outside Suburbs | 1 | 6 | 4 |
| All Places | 100 | 100 | 100 |

Source: East Boston CLUIS Survey, 1988.
Based on 51 responses.
Percentages may not sum to 100 due to rounding.

range (23 percent). Each category of firm had the same share of employees (11 percent) in the highest income group (more than $40,000 per year). See Table 2.3.

**Employee Residence**

Over one-half of the employees in the airport-related firms reside in East Boston, while only 18 percent of the other firms' employees do so. Most of the remainder of the airport-related firms' employees live in Winthrop/Revere or the North Shore. The employees of the other firms are generally evenly distributed among the survey's locational categories. See Table 2.4.

**Age of Firms**

Overall, the average age of the surveyed firms is 21.7 years. However, the airport-related firms are much younger, at 13.1 years, while the non-airport firms average 27.9 years.

**Physical Growth/Present Size**

Surprisingly, very few of the 51 surveyed firms have expanded their physical facilities. However, the seven firms that have expanded have roughly doubled their floor space. No major differences are apparent among the airport-related firms and the others with respect to physical expansion. The airport-related firms tend to be slightly more space-intensive than the others, in terms of both space per employee and space per firm measurements. See Table 3.1.

**Parking Needs**

Only a handful of firms in the survey (7 out of 51) expressed a desire for additional parking if any were available. The firms that did need parking only asked for an average of about 10 additional spaces.

**Loading Docks**

Twenty of the 51 interviewed firms have loading docks at their facilities. The average facility contains two or three docks. Only 11 of the 20 firms with loading docks use them as storage areas for trucks during off peak hours. Eight airport-related firms account for two-thirds of the total number of loading docks identified in the survey, with an average of four or five docks per firm. As expected, almost all of the airport-related firms that

use loading docks are freight forwarders. Five of these firms indicated that they store trucks at their docks overnight. See Table 3.2.

**Ownership/Rental of Facilities**

Overall, the firms in the survey's sample are fairly evenly divided between renting and leasing their facilities. Twenty three rent or lease, and 27 own the buildings in which their business is conducted. However, a clear trend exists among the airport-related and other firms: eighty percent of the airport-related firms rent or lease their facilities, while 77 percent of the other firms own their buildings.

**Prior Use of Sites**

About one-half of the firms indicated that the prior use of the site of their facility was different than its current use. Generally, the use changes have been from vacant land or an obsolete manufacturing enterprise to transportation service companies or light manufacturing firms. The firms whose facilities represent a change of land use are roughly evenly split between airport-related and other types.

**Other Facilities/Branches**

Eleven percent of the firms in the survey have other facilities in East Boston away from the main site. In every case, these facilities are nearby ancillary offices, storage buildings, or parking lots. Eleven of the 51 firms have branches of their business operations outside East Boston; nine of these firms are related to the airport. The branches' locations vary widely, from

the New York metropolitan area to the City of Boston.

Table 3.1. Floor Space of East Boston Businesses, 1988.

| Floor Space in Square Feet: | By Type of Business: Airport-Related | Other Types |
|---|---|---|
| Total Space | 399,531 | 443,303 |
| Space Per Employee | 595.6 | 523.4 |
| Space Per Firm | 16,168 | 14,777 |

Source: East Boston CLUIS Survey, 1988.
Based on 46 responses.

Table 3.2. Loading Dock Usage of East Boston Businesses, 1988.

| Feature | By Type of Business: Airport-Related | Other Types | All Types |
|---|---|---|---|
| Percent With Loading Docks | 38 | 40 | 39 |
| Percent Using Docks for Overnight Storage | 24 | 20 | 22 |
| Average Number of Docks Per Firm | 4.4 | 2.1 | 2.6 |

Source: East Boston CLUIS Survey, 1988.
Based on 47 responses.

**Past and Future Sales**

Seventy-four percent of the respondents indicated that their sales had increased in the period 1983-1988. Only three firms experienced growth of over 100 percent for this period, while most of the remaining firms are concentrated in the 0-50 percent growth range. Please see Table 10a for the distribution of growth levels.

With respect to the airport-related/other firm comparison, a major difference that exists between the two groups is the average amount by which the firms grew in the period 1983-88. The airport-related firms grew by an average of 72 percent during this period, while the other types of firms grew by an average of only 40 percent over the same period. Seventy percent of the 51 firms expect sales to increase during the period 1989-93, 16 percent of the firms are planning on no growth for the next five years, and the remaining 14 percent were unable to predict future sales trends. During 1989-93, the airport-related firms expect to average 34 percent growth in sales and the others expect sales to grow by an average of 42 percent. See tables 4.1 and 4.2.

**Relocation/Expansion Plans**

Eighty-eight percent of the surveyed firms answered "yes" when asked if they intended to remain at their present locations for the next five years. Four firms (8 percent) indicated that they intend to move outside the city within 3 to 4 years. These firms are not related to the airport, and are all in manufacturing industries. Two are moving due to lack of sufficient expansion space in East Boston, and the others are leaving because of a combination of high

rents, increasing crime, and a shortage of labor.

About one-third of the surveyed firms plan to expand their present facilities within five years. This group of 18 firms is evenly divided between airport-related and other types of firms. Twelve firms specified the amount of floor space that they intend to add to their buildings, with the average firm planning to add 11,104 square feet within five years. The seven airport-related firms in the group plan to add an average of only 8,750 square feet, and the eight others intend to expand by an average of 14,400 square feet. Four firms intend to add parking, ranging from a large 200-car parking lot to a small lot for 5 cars. Six of the 51 firms are planning to add a total of 240 parking spaces. Two hundred ten of these spaces will be used for rental car and delivery van storage and the remaining thirty spaces are intended for employee and customer parking.

Although not all of the firms that intend to expand specified a date at which they would do so, the 11 responses that were obtained indicate that the average firm will expand in about 1.5 years. While most of the expansion space will be for offices, a few firms are seeking to expand their storage/warehouse facilities. No differences are apparent between the airport-related and other firms in the dates and types of expansion plans.

Table 4.1. Employment Growth of East Boston Businesses, 1983-88.

| Growth 1983-88 In Percent | By Type of Business: Number of Businesses | Percent of Total |
|---|---|---|
| -25 to -1 | 5 | 11 |
| 0 to 25 | 19 | 43 |
| 26 to 75 | 12 | 27 |
| 76 to 100 | 5 | 11 |
| Over 100 | 3 | 7 |
| Total | 44 | 100 |

Source: East Boston CLUIS Survey, 1988.
Based on 44 responses.
Percentages may not sum to 100 due to rounding.

## Parking

Some of the biggest differences between the two groups of firms are in their parking and traffic characteristics. The parking data include the following uses of auto-sized parking spaces: customer, employee, and storage. The airport-related firms use 45.2 parking spaces per firm, 2.8 spaces per 1000 square feet of floor space, and 1.7 spaces per employee, while the non-airport-related firms use only 19.7 spaces per firm and 1.3 spaces per 1000 square feet, and 0.7 spaces per employee. See Table 5.1.

## Traffic

The two groups of firms are about the same in terms of trips to work by employees. In airport-related firms, seventy percent of the daily commuting trips are with single-driver autos, while 62 percent of the employees in the non-airport firms drive alone to work. See Table 5.2.

The number of vehicle trips made during the workday however, vary widely among the two groups. Each airport-related firm generates an average of 82 one-way trips per day and 3 trips per employee, while each non-airport-related firm generates an average of 14 trips per day and 0.5 trips per employee. See Table 5.3.

Table 5.1. Off-Street Parking Spaces of East Boston Businesses

| Off-Street Parking Spaces | By Type of Business: Airport-Related | By Type of Business: Other Types |
|---|---|---|
| Number | 949 | 591 |
| Number Per Firm | 45.2 | 19.7 |
| Number Per 1,000 Square Feet of Parcel Area | 2.8 | 1.3 |
| Number Per Employee | 1.7 | 0.7 |

Source: East Boston CLUIS Survey, 1988.
Based on 46 responses.

Table 5.2. Employees of East Boston Businesses, 1988.
Mode of Travel to Work

| Number of Employees Travelling By: | By Type of Business: Airport-Related | Other Types | All Types |
|---|---|---|---|
| Automobile | 403 | 476 | 879 |
| MBTA Subway or Bus | 116 | 215 | 331 |
| Walking | 43 | 43 | 86 |
| Car Pool | 19 | 28 | 47 |
| All Modes | 581 | 762 | 1343 |

| Percent of Employees Travelling By: | By Type of Business: Airport-Related | Other Types | All Types |
|---|---|---|---|
| Automobile | 69 | 62 | 65 |
| MBTA Subway or Bus | 20 | 28 | 25 |
| Walking | 7 | 6 | 6 |
| Car Pool | 3 | 4 | 3 |
| All Modes | 100 | 100 | 100 |

Source: East Boston CLUIS Survey, 1988.
Based on 46 responses.
Percentages may not sum to 100 due to rounding.

Table 5.3. Vehicle Trips During Work Day
To or From East Boston Businesses, 1988.

| Vehicle Trips | By Type of Business: Airport-Related | Other Types |
|---|---|---|
| Number | 1725 | 423 |
| Number Per Firm | 82 | 14 |
| Number Per Employee | 3.0 | 0.5 |

Source: East Boston CLUIS Survey, 1988.
Based on 46 responses.
Note that one-way trip counts as 1; two-way counts as 2.

**Location Factors: Characteristics of East Boston**

The most important reason given by all airport-related firms for locating in East Boston was proximity to Logan airport. A few of the firms that were not defined as airport-related also chose an East Boston location to be near the airport. Overall, there were four common reasons given by the surveyed firms for locating in East Boston. These included access to highways, access to the waterfront, available expansion space and/or low rent, and proximity to an adequate labor force.

**Location of Customers**

The trends of customer location among surveyed firms tend to follow the type of business of the firm. In terms of customer location, the airport-related firms fall into two groups: the freight forwarders' clients tend to be located throughout the Boston Metro area and New England, and the customers of the remaining airport-related firms, such as car rental firms, tend to be concentrated at Logan airport and in East Boston. The non airport-related firms also divide into two main groups: large manufacturing and small auto body/service. Generally, the customers of East Boston's large manufacturing firms are located outside the City of Boston, in the Boston Metro area, and the New England region. The auto body/service firms tend to serve clients located in the East Boston neighborhood.

The major difference between the airport-related and other firms is the distribution of their clients in the City of Boston between East Boston and the rest of the City. The airport-related

firms tend to have a large share of clients in the City of Boston, but outside of the East Boston neighborhood. The other firms' Boston clients are located primarily in East Boston. See Table 6.1.

Table 6.1. Location of Customers of East Boston Businesses, 1988.

| Percent of Customers In: | By Type of Business: Airport-Related | Other Types | All Types |
|---|---|---|---|
| East Boston | 7 | 24 | 17 |
| Logan Airport | 19 | 6 | 11 |
| Other Boston | 13 | 14 | 14 |
| Metropolitan Area | 34 | 32 | 33 |
| Outside Metro Area | 27 | 23 | 25 |
| All Places | 100 | 99 | 100 |

Source: East Boston CLUIS Survey, 1988.
Based on 44 responses.
Percentages may not sum to 100 due to rounding.

**Comments on the Survey Method**

**1. Identify Firms and Assemble Master List**

Most of the firms in the survey were identified during the land use field survey in August 1988. Approximately 40 other firms, most of which were freight forwarders, were added to the survey list after August. All of the identified firms were assembled into a master list that included each firm's name, address, phone number, type of business, and the name of a contact at the firm.

**2. Contact Firms for Interview or Mail-in Reply**

The president, owner, or manager of each firm on the master list was contacted and requested to grant a personal interview to answer the questions on the survey instrument. Although the survey instrument was designed for use in an in-person interview, the CLUIS staff sent out around 130 surveys to be mailed back by contacts that were unavailable or too busy for a personal interview. This mail-back method supplemented the personal interviews fairly well.

**3. Response to Survey**

A summary of the level of response to the survey follows:

136 firms were identified and contacted

37 personal interviews were conducted

65 surveys were mailed, of which 14 were returned

8 firms explicitly declined to participate in the survey

**4. Problems, Sources of Error**

Many airport-related firms, especially freight forwarders,

tend to be small (2-3 persons) and short-lived. Lists of such firms quickly become out of date, as firms move, change ownership, or change names. This makes contacting firms and scheduling interviews particularly time-consuming. Also, the quality of the responses varied, with the mail-in responses being somewhat less complete than the personal interviews.

Although the surveyed firms compose a relatively accurate sample of the economic activity in East Boston, exclusive of airport property, there are many airport-related firms in the freight forwarding, auto and truck body/service, and car rental industries that were not interviewed and/or did not return a survey in the mail. According to the staff's master list of firms in these industries, there are roughly 35-40 freight forwarders, 10-15 auto body/service shops, and 3-5 car rental firms that failed to grant an interview or return a survey through the mail. These firms generate thousands of auto and truck trips, undesirable noises and smells, and maintain large parking lots throughout the neighborhood.

The staff was unable to schedule an interview or obtain a completed survey form in the mail from a park-and-fly enterprise. These firms are of particular interest to the East Boston planners and residents because they consume large amounts of land, represent few jobs, generate hundreds of auto trips each day, and are located on the fringe of the residential neighborhood.

The survey did not include any firms located on the airport. In addition, the survey did not include consumer services and

eating and drinking firms in East Boston that are patronized by airport employees and passengers such as sandwich and donut shops, limousine services, and bank branches.

David W. Jankowski

June 1989

## IV. PUBLIC ACCESS TO INFORMATION GENERATED BY CLUIS

Research done by the B.R.A. Legal and Research Departments has brought some answers to the questions asked by the East Boston CLUIS Committee regarding public access to the information generated by CLUIS. The laws concerning public access generally do not reflect the growth of computer use and capability, so many of the issues are as yet untested. The legal responsibilities of government regarding release of computer data might become more precisely defined in the future; at present, they are described in the answers below to the questions posed by the CLUIS Committee.

Is the CLUIS system in fact a new entity? Public access law refers to records produced by programming a database system to retrieve and assemble data and print it on paper or into another computer file. While CLUIS has greater capabilities than previous database systems, it remains within the law nonetheless. The data and maps it produces will be considered public records.

Therefore, the above question may be less relevant than the question: Is the information produced by CLUIS a new entity? Given that the capability to easily match data from several different sources has not existed before, most information produced by manipulating the system would be new. This is important because until the system is actually programmed to compile a specific set of data, that data is not considered part of the public record and therefore is not necessarily available to the public.

Could the B.R.A. refuse anyone access to the information?

The moment CLUIS produces a piece of information, that information becomes part of the public record. Therefore, information that we produce for our own use in planning and zoning would be available to anyone who requests it, with an exemption for information containing data that would violate individuals' right to privacy. The one piece of information possibly considered to do this is that noting parcels where taxes are owed. If this is exempted, it might prevent us from providing disks containing all the raw data stored in the system, or a map or printout that defines parcels on which taxes are owed.

Any other map, printout or data file on disk that we have produced with the CLUIS for any purposes would be considered a "public record" subject to disclosure under Massachusetts law and the Federal Freedom of Information Act. Computer-stored records are considered public records, so the CLUIS hard disk data file itself would be considered a public record and subject to disclosure.

However, there are no legal guidelines regarding how these records must be disclosed. It appears that a paper printout of all the records in any rational order may be sufficient, and that we would not have to provide the data in disk form. Furthermore, there currently is no legal obligation to supply the computer program or codes that would make it possible to easily access these records on disk. Lawsuits on these issues are being considered in Federal courts. Under the Freedom of Information Act applying to Federal agencies, at the moment, a paper printout of database

records is considered a "reasonably accessible form," and software used internally for deliberative processes is considered exempt from disclosure.

In addition, the above requirements do not mean we are required to use CLUIS to create a new set of records, data, or a map at any individual's request. "Public records" are defined in Massachusetts law as those "made or received by any officer or employee of any agency." So if we produce a map for B.R.A. purposes showing all R-2 parcels, we are required to copy it for a member of the public requesting that information. But if someone asks for a data file or map we have never produced for ourselves or some one else, we would not be required to program CLUIS to produce that information.

One interesting twist of the law is that any information we compile for a private individual becomes a "public record." So if we do a special task for someone, the next individual to want that same information must be provided with it as a public record.

In sum, we must allow access to all information we produce for the purposes of our planning work, some other agency's use, or even private use, unless that information contains data that would violate an individual's right to privacy. But we could refuse to use CLUIS to produce new information we may have access to but haven't compiled already.

How would a Freedom of Information Act request be handled? Requests should be handled on a case-by-case basis. Generally, information we have already compiled would be disclosed to anyone

requesting it. While the CLUIS Committee could be notified of such requests to gauge demand, there would be no point in the Committee reviewing them since we are obligated to release the information. If we feel that the information may violate someone's right to privacy, the B.R.A. legal department might be able to judge if it can be released.

Requests to compile information in a new way are subject to our discretion, on the other hand. Such requests could be sent to a member of the CLUIS Committee who could either make a quick approval and notify B.R.A. staff to proceed, or could decide to refer the request to the full Committee. If the B.R.A. staff does not hear from the CLUIS Committee within seven days, and decides the new information would be valuable to the community or our planning work, it would do the necessary programming to produce it.

Could the B.R.A. charge a fee for products from the system beyond mere copying costs? Again, there are few explicit legal guidelines. Massachusetts law requires that a copy of a public record must be furnished for "a reasonable fee." It does not define what is reasonable, and does not refer to xeroxing costs. More specifically, it states that "Every person for whom a search of public records is made shall, at the direction of the person having custody of the records, pay the actual expense of such search."

If we wish, therefore, we could devise a fee structure for information based on the cost of producing it as well as copying

it. The true costs of setting up the database and mapping program, purchasing software and hardware, and manipulating the system need not be recouped. The staff time required to program and operate CLUIS to produce a map or set of data could be considered in the fee, along with xeroxing and handling charges.

Several planning agencies around the country have begun to sell reports and data at a price reflecting the true costs of the research. The Atlanta Regional Commission markets its research and data in both paper and diskette form, with prices ranging from $10 to $140, and for higher fees it will perform customized data processing of public records.

Richard Henderson
June 1989

## V. USER MANUAL FOR THE CLUIS SYSTEM

This manual is intended for the use of planners, researchers, and the CLUIS subcommittee of the East Boston Planning and Zoning Advisory Committee (PZAC). This will also serve as a brief reference and documentation manual for the CLUIS staff who designed the land use information system. The CLUIS system consists of two parts: a database system using dBASEIII and a geographic information system (GIS) using PC ARC/INFO.

This document includes, (A) a list of the data files in the East Boston CLUIS and a list of the computer hardware and software in use; (B) instructions for looking at data on the computer screen and printing that information; and (C) instructions for producing plots of information displayed on a map of East Boston.

Users are advised to have a member of the CLUIS staff on hand when using the CLUIS database system or the GIS system. This manual cannot include everything that may come up in a session at the computer. While access to the data and standard plots are designed to be easy, the user may desire slight variations or may run into a problem with PC ARC/INFO which is not an easy software to use. In any case, the plotter should be operated by the CLUIS staff due to the precise nature of the plot set up.

## A. List of Data Files in the East Boston CLUIS

| File Name | Description |
|---|---|
| Field Inspection | Assessor's parcel file, from Year 1988, with changes and additions from field inspection in August, 1988. |
| Zoning Board of Appeals | BRA file of zoning petitions, present. |
| Addressee | Person designated to receive tax bills from the City Assessing ment. If no addressee, mail goes to owner. |
| Commercial | Structure and occupancy data for each commercial or exempt parcel Assessing Department. |
| Fires | Building fires 1986-88, from Department. |
| Inspectional Services | Information on all building permits from Inspectional Services Department, 1985-88. |
| Mail | Current mail address used by Assessing for tax bills (goes with Addressee file). |
| Parcel | Current Assessing data on each parcel, including land use, size, ownership, location. |
| Rent Equity | Rent controlled and vacant decontrolled units from the Rent Equity Board file. |
| Residential | Current Assessing data on structure occupancy, parking. |
| Sales | Sales date, price, grantee, grantor 1983-1989 from Assessing Department |
| Tax History | Includes total tax owed by fiscal year 1985-89, from Assessing Department |
| Tax Title | Accumulated Balance of back taxes owed, from Assessing. |

For more detail on these files, see CLUIS Data Dictionary, Appendi
2.

The following is the computer hardware in use at the Bosto
Redevelopment Authority:

Dell 386 computer (model 310)
20 megahertz CPU;
322-megabyte hard disk with 18 milliseconds access;
one 1.2-megabyte, 5.25-inch disk drive;
one back-up tape drive;
extended memory, 3 megabytes;
math co-processor: 80-387;
14-inch color monitor: NEC Multisync 2A;
Video Graphic Array (VGA) card;
Printer: PC's Limited Printer System 800, wide carriage, dot matrix

IBM PS/2 Model 80;
44-megabyte hard disk;
color display 8514;
Houston Instruments HI-PAD Plus digitizer 12 X 12;
Printer: Hewlett Packard Laserjet Series II.

Hewlett Packard A-size desk plotter;

Hewlett Packard Draftmaster I E-size plotter;

The following software is in use at the BRA:

PC ARC/INFO, version 3.3, geographic information system;

dBASE III Plus, data base manager;

Graphic Software Systems CGI Device Drivers;

Epsilon text editor;

AWK string manipulation language.

Approximate disk space required for CLUIS:

Coverage of East Boston in PC ARC/INFO -- 6 megabytes;

INFO files in PC ARC/INFO -- 20 megabytes;

Data files for East Boston -- 20 megabytes;

Software for CLUIS -- 20 megabytes.

## B. The CLUIS Database:
Looking at Information on the Computer Screen
and Generating Reports

This section describes screen access to information on parcels and options for printing information from the CLUIS data files.

Getting into the CLUIS directory on the CLUIS 386 computer.

In the C:> drive, type NORMAL and enter; a message to re-boot the system will appear; clear the A: drive and press simultaneously CTRL-ALT-DEL keys.
The Starlan Network menu will come up; hit 1 and enter. At the C:> prompt, change directory by typing CD CLUIS and entering. Then at the C:\CLUIS> prompt, type CLUIS and enter. This will execute the dBASE software and, after you hit ENTER again, the CLUIS menu.

The CLUIS Menu.

The main menu offers six choices:

(1) Parcel Based Inquiry
(2) Precinct/Block Review
(3) Street Name Review
(4) Reports/Inquiry
(R) Return to dBASE III
(Q) Quit dBASE III

Option 1 is useful if you know the parcel identification number of a parcel of interest. For example, if you know that Logan Airport's PID is '0104126000', this option will get you to the data in the most direct manner. Option 2 is useful if you know the block number of the property of interest. You can quickly access data for any parcel on the block. Option 3 gives you access to a particular street or street address. For example, if you wanted to view data on a property on 53 Webster Street, but you did not know the PID or block, this would be the best option. Option 4 allows you to print out reports or create files of information to view or manipulate later. Option R returns you to the dBASE data base manager where you might want to browse a particular dBASE file. Option Q sends you back to the C:>CLUIS> subdirectory level.

Upon entering 1, the screen will provide a blank to fill in with the desired parcel number. Entering 2 will produce a blank for ward/precinct/block numbers. Option 3 allows entry of a street name in CAPS and type with or without a street number. If no street number is entered, the screen will show each address on the chosen street in sequence. If you enter a street number that is not in the file for that street name and type, you will be sent back to the blanks for another try.

Options 1-3 will show a screen of information, including parcel, block, street name, land use, square feet of the parcel, and owner, plus options for viewing additional information:

(A) Tax Bill Mailing Address
(B) Fires
(C) Commercial Information
(D) Residential Information
(E) Inspectional Services
(F) Rent Equity Board
(G) Tax History
(H) Tax Title (back taxes)
(I) Sales History
(J) BRA Initial Field Survey

Help is available at any time: press Ctrl and PageDown keys together. Currently, help provides only definitions of codes used in the data base. Fill in the code box with either LU for land use codes, IF for incendiary factors in the fires file, OC for occupancy codes in the commercial file, or EX for exempt property types. For example, in looking at a particular property, the land use may be coded as CM. To find the definition of CM, press CTRL and PGDN together and you will see a list of land use codes; CM is Condo Main, or the condo master deed for the condominium units on that parcel.

You can print what is on the screen by hitting the Print Screen key (with the printer on line).

Note that, for options #2 and #3, the user may "walk around the block," that is view the parcels in sequence, by pressing the F1 key (forward) or F2 (to review).

After you have chosen one of the first 3 options, you may get back to the main menu by pressing the escape (ESC) key.

If option #4 is chosen, a report menu will appear.

## Generating Reports

The report menu offers nine choices:

(1) Parcels by Land Use -- Summary Count
This will give a report of the number of parcels and the total square feet of land area in East Boston by type of land use: R1,R2,R3,....E,C, etc.

(2) Parcels by Land Use -- Historical Count
This has the same format as #1, but it includes one report for each fiscal year 1985-1989.

(3) Parcels -- Current Use (Assessing data) versus Actual Use (field survey)
This report lists parcels which do not have matching land uses between the current Assessing Parcel file and the field survey of August 1988. The land uses from each file are shown along with the address of the parcel.

(4) Parcels by Parcel Number
This prints out addresses and land uses for parcels for a chosen area in parcel number order.

(5) Parcels by Ward/Precinct/Block
This prints out addresses and land uses for parcels for a chosen area in Ward/Precinct/Block order.

(6) Parcels in Street Name Order
This prints out addresses and land uses for parcels for a chosen area in Street Name and Number order.

(7) Fires Listed by Street Name
This report prints out fires in street name order for a chosen area.

(R) Return to dBASE III

(Q) Quit dBASE III

Upon entering one of the above numbers or letters, the screen will provide blanks to fill in for parcel number, block, or street name. The screen will also give you two options:

Send to Printer (enter T for true or F for false)

Create a PID File (enter T or F)

For a printed report, enter a "T" after "Send to Printer"; be sure that the printer is turned on and that the control panel is set to "on-line".

If you wish to create a file for your report, "Send to Printer" should be "F", and "Create a PID File" should be "T"; this will create a file made up of parcel identification numbers for parcels that were selected in your report option (1-7), above. That file could be used later for graphic display on a parcel map.

Note also that you may enter blanks for ward, precinct, and block and receive a report for all of East Boston (Ward 1); or you may enter ward 01 and choose a precinct, say 11, and receive a report for that entire precinct.

If you have chosen a report number, but decide that you do not want that report, press the escape (ESC) key; that will send you back to main menu (you may have to hit ESC more than once to get to the menu).

## C. Geographic Information System

The CLUIS project uses PC ARC/INFO as its geographic information system (GIS). Most of the procedures used for set-up and cleaning of the geographic files are documented in the CLUIS log book. Of course, the primary source for staff in setting up the mapping system was the PC ARC/INFO printed user manuals. The PC ARC/INFO manuals are well-written and informative.

Now that the mapping system is ready to use, a few plotting procedures are available to users. However, this section is best treated as a crib sheet for users who have experience in PC ARC/INFO. For all users, a CLUIS staff member will be available for assistance.

### Getting Into PC ARC/PLOT

In the C:> drive, type ai33 and enter; a message to re-boot the system will appear; press simultaneously CTRL-ALT-DEL keys. This sets up system parameters for the GIS.

At the C:> prompt, change disk drive by typing K: and entering. At the K:> prompt, type ARC and enter. This will execute the PC ARC/INFO software. You will see the ARC/INFO logo and then see a prompt K:>ARC>. Type ARCPLOT and enter, and you will see a colon at the bottom of the screen. The combined geography and its attributes (data files) in PC ARC/INFO are called a "coverage." You will be using a coverage named EBUSER or some other similar coverage.

In the instructions below, the commands used in plotting are in capital letters and a space between letters or numbers must be entered as a space.

### Plotting a Base Map

At the colon, type DISP 4 and enter. This sets the output to the computer screen as opposed to the plotter (1) or printer (2). Next, set the map extent by entering MAPE EBUSER (this could be any coverage created in ARCEDIT).

Then specify the feature to plot by entering ARCS EBUSER (in addition to arcs, or lines, other features that can be plotted include polygons, points, and labels). The sequence on the screen looks like this:

```
: DISP 4
: MAPE EBUSER
: ARCS EBUSER
```

ARCPLOT will draw the lines for all parcels in East Boston on the screen. If you wish to exit, type QUIT at the : prompt.

To select the plotter for the output, you could start with DISP 1, instead of DISP 4, and proceed as above. To produce plots for presentation, use the plotting macro which automatically draws borders, legend, scale, and titles. First, plot on the screen to be sure the plot will be what you expect it to be. The procedure would be:

: @BRAPLTAF

You will be prompted to enter the display device (1 = plotter, 4 = screen); the coverage name (e.g. EBUSER); the x dimension of the display device in inches (7.5 for the screen, 46 for the plotter); the y dimension of the display device in inches (5.5 for the screen, 34 for the plotter); the first, second, and third titles; the legend (key) file name; the item on which you are shading (e.g. ZONING); and the name of the look-up table (e.g. ZONING.LU);

Each choice includes default values < > that would be chosen by pressing the enter key. At the end, the macro asks if the choices are correct; if they are incorrect, you may change any response.

Pressing Y for yes these are the correct choices, the plot macro runs according to your settings.

If you have chosen the plotter, you will see this message:

CHANGE PAPER THEN PRESS RETURN

Put paper in the plotter, with the edge touching the near edge of the white guideline, and be sure that the arrow on the left roller lines up exactly with the long edge of the paper. Then press return, and the plotting will begin.

An E-size plot (48 X 36) will take around 50 minutes to an hour for full hatching of all parcels. Other plots of selected parcels would take closer to 20 to 30 minutes.

In the program above, the x and y displacement allow a map to be prepared offset from the origin point. Ideally, both should be used in proportion to each other, or distortion of the map will occur. The macro allows three titles; one convention is to put the map topic as the first title, the map location and data year (usually 'East Boston 1988') as the second title, and the file name and date of the plot as the third title.

The legend file name should be an ASCII file in the same directory as the coverage and SML file (i.e. the plot macro) that contains information for PC ARC/INFO to create the key legend. The shade item is the name of the item in the INFO PAT file on which one

wishes to shade. The look-up file is an INFO file; it must be created in TABLES or INFO using DEFINE (for structure definition) and ADD (for adding data). A value and shade value (color) must be present for each item value on which one wishes to shade. A base value of '0' (background color) should be included where one wishes not to shade certain items. Since data values are assigned to the next higher shade value, one should take care to set '0' values where appropriate.

For more detail on PC ARC/INFO, consult the Starter Kit, ARCEDIT, and ARCPLOT manuals. The CLUIS log book also has some detail on use of PC ARC/INFO.

Jeff Brown
Simon Lewis

June 1989

## VI. CREATION OF THE DATA BASE AND UPDATING PROCEDURE

The process for updating the CLUIS system involves creation of a new set of files from City departments, additions to the Zoning Board of Appeals file, and corrections to City department data that have not already been made at the source.

### Creating a CLUIS Data Base

The bulk of the CLUIS data base was created on the Assessing Department VAX 11/780. The creation process comprises the following procedures.

The CLUIS file creation process is performed in two steps. The first is a file preparation step which takes the non-Assessing data sources and makes them usable by the program that creates the CLUIS data files. The second process accesses all of the available data sources from one BASIC program and creates the CLUIS files, which are formatted for the CLUIS PC system, and simply have to be ported to that computer.

The computer programs for the creation process have been permanently established on the Assessing computer and are available there for reuse by the BRA and Massport. Bowen & Hayes, Inc. can be contacted to perform the data acquisition from the City of Boston Management Information Services (MIS), make the arrangement for computer time and disk space with Assessing Information Systems, execute and validate the procedures, and deliver the data on magnetic tape.

The CLUIS software and documentation are located in the directories DSK2:[BOWEN.CLUIS] and DSK3:[BOWEN.CLUIS]. To read this manual just type the following command at the '$' prompt.

```
TYP DSK2:[BOWEN.CLUIS]MANUAL.DOC
```

Bowen & Hayes has also copied the entire contents of these directories to two magnetic tapes - backups to be stored at the BRA Research Department and at the Massport Planning Department. Creating a CLUIS data base is a matter of acquiring the non-Assessing data sources from City MIS, putting them in DSK3:[BOWEN.CLUIS], converting them (command stream 1) for use by command stream 2, and then executing command stream 2 to create the data base. The following section lists the commands, with related comments.

```
**********************************************************************
First Stream
**********************************************************************
$!*  Comments  *
$!*  Procedure name:  CONVERT_IBM_DATA_SOURCES
$!*  Date:  December 1, 1988
$!*  Author: John Bowen, Bowen and Hayes, Inc.

$!*  This is step 1 in a 2-step process to create the BRA's CLUIS
     database.  This command procedures creates the following files
     that are required by the procedure CREATE_CLUIS:

          CLUIS_DIR:ISD.IDX
          CLUIS_DIR:TAX_TITLE.IDX
          CLUIS_DIR:RENT_EQUITY.IDX
          CLUIS_DIR:FIRES.IDX

$!**********************************************************************
$
$!* Commands *
$         ON ERROR THEN GOTO ERROR_HANDLER
$         @DSK2:CLUIS_LOGICALS
$         ASSIGN DRC1:[BOWEN.CLUIS] CLUIS_DIR:
$         SET DEFAULT CLUIS_DIR:
$
$!**********************************************************************

$!* Comments  *

$!*  CITY MIS (IBM) group (725-3458) must provide 4 files which
     are used by this routine.  The files are described below and
     the specific contacts for each of them are identified:

$!*  Fire Department - Contact John Cappadonna at MIS or Steve
     Morash at the Fire Department.  Ask for all incident type 110
     fires from the "Fire Alarm File,"

$!*  Inspectional Services - Contact Jack Dahlstrom or John
     Cappadonna at MIS.  Jack wrote a special data extraction
     routine to extract permits only.He has documented and archived
     this procedure for future reuse. The program identification
     is BOWEN001.

$!*  Rent Equity - Contact Stan Vakleveck or John Cappadonna at
     MIS, and just request a copy of the Rent Equity file.      *
```

```
$!*  Tax Title - Contact Joe Pierce at MIS and ask for the
     following information from the Tax Title file. These are
     accounts with open balances as of the run date.

          Parcel id           - 10 characters
          Fiscal year         - 2   "
          Accumulated Balance - 10 characters


$!*  When the files above are copied to tape and downloaded to the
     Assessing Vax in CLUIS_DIR, they need to have the names
          I S D . S O U R C E _ D A T A ,    F I R E S . S O U R C E _ D A T A ,
          RENT_EQUITY.SOURCE_DATA, TAX_TITLE.SOURCE_DATA. At that
          point this procedure may be executed,and followed up with
          step 2, a procedure named CREATE_CLUIS.
$!****************************************************************

$!* Commands *
$         ASSIGN ISD.SOURCE_DATA ISD_SOURCE_FILE
$         ASSIGN FIRES.SOURCE_DATA FIRES_SOURCE_FILE
$         ASSIGN RENT_EQUITY.SOURCE_DATA RENT_EQUITY_SOURCE_FILE
$         ASSIGN TAX_TITLE.SOURCE_DATA TAX_TITLE_SOURCE_FILE

$!****************************************************************
$!* Comments *
$!*              ***********  ISD  ************

$!*  STEP 1.) This file has to be converted internally because the
     data in three of the fields is in a format ("RIGHT OVERPUNCHED
     NUMERIC") that cannot be accommodated in step 2.  For that
     process, these numeric fields will be changed to LONGWORD,
     just another data type.
$!****************************************************************

$!* Commands *
$         CREATE/FDL=ISD_CONVERTED.FDL ISD_CONVERTED.DAT
$         ASSIGN ISD_CONVERTED.DAT ISD_CONVERTED_FILE
$         DTR
$         READY ISD SHARED
$         READY ISD_CONVERTED SHARED WRITE
$         ISD_CONVERTED = ISD
$         EXIT
$!****************************************************************

$!* Comments *
$!*  STEP 2.) The converted file is then processed by the following
     Basic program which extracts specific fields from each
     selectable record and outputs them to a file.
$!****************************************************************
$!* Commands *
$         RUN CLUIS_DIR:ISD_STRIP
```

```
$!*****************************************************************

$!* Comments *
$!*  STEP 3.) Sort the extract file by parcel identification number
     (PID) in order to be able to index the extract file by the PID
     field, which makes it usable for parcel lookups in command
     stream 2.
$!*****************************************************************
$!* Commands *
$          SORT ISD.DAT/KEY = (POS:1, SIZE:10, NUMBER:1) -
               /KEY = (POS:28, SIZE: 2, NUMBER:2) -
               /KEY = (POS:31, SIZE:4, NUMBER:3)/STAT ISD.SOR/SEQ
$!*
$!*
$          CONVERT/NOSORT/FAST_LOAD/STATISTICS -
               /EXCEPTIONS_FILE=ISD.EXC -
               /FDL=ISD.FDL -
               ISD.SOR ISD.IDX
$!*
$!*
$          DELETE/LOG ISD.DAT;*
$          DELETE/LOG ISD_CONVERTED.DAT;*
$          PURGE /LOG ISD*.*
$!*****************************************************************
$!* Comments *
$!*  STEP 4.) A similar process is applied to the source files for
     tax title, fires and rent equity information. The idea is to
     end up with usable direct access files for all non-Assessing
     data sources.
$!*****************************************************************
$!*
$!*
$!*        *************  FIRES  *************
$!*
$          RUN CLUIS_DIR:FIRES_STRIP
$!*
$          SORT FIRES.DAT/KEY=(POS:1,SIZE:10)/STAT FIRES.SOR/SEQ
$          CONVERT/NOSORT/FAST_LOAD/STATISTICS -
               /EXCEPTIONS_FILE=FIRES.EXC -
               /FDL=FIRES.FDL -
               FIRES.SOR FIRES.IDX
$          DELETE/LOG FIRES.DAT;*
$          DELETE/LOG FIRES.SOR;*
$!*
```

```
$!*         ************  RENT EQUITY  ************
$!*
$           RUN CLUIS_DIR:RENT_EQUITY_STRIP
$!*
$           SORT    RENT_EQUITY.DAT/KEY=(POS:1,SIZE:10)/STAT
            RENT_EQUITY.SOR/SEQ
$           CONVERT/NOSORT/FAST_LOAD/STATISTICS -
                /EXCEPTIONS_FILE=RENT_EQUITY.EXC -
                /FDL=RENT_EQUITY.FDL -
                RENT_EQUITY.SOR RENT_EQUITY.IDX
$           DELETE/LOG RENT_EQUITY.DAT;*
$           DELETE/LOG RENT_EQUITY.SOR;*
$!*
$!*         ************  TAX TITLE  **************
$!*
$           RUN CLUIS_DIR:TAX_TITLE_STRIP
$!*
$           SORT    TAX_TITLE.DAT/KEY=(POS:1,SIZE:10)/STAT
            TAX_TITLE.SOR/SEQ
$           CONVERT/NOSORT/FAST_LOAD/STATISTICS -
                /EXCEPTIONS_FILE=TAX_TITLE.EXC -
                /FDL=TAX_TITLE.FDL -
                TAX_TITLE.SOR TAX_TITLE.IDX
$           DELETE/LOG TAX_TITLE.DAT;*
$           DELETE/LOG TAX_TITLE.SOR;*
$           WRITE   SYS$OUTPUT   "IBM   DATA   SOURCES   CONVERTED
            SUCCESSFULLY. PERFORM STEP 2."
$!*
$           EXIT
$           ERROR_HANDLER:
$           WRITE SYS$OUTPUT "IBM DATA SOURCES WERE NOT CONVERTED
            SUCCESSFULLY."
$           EXIT
$!*************************************************************
```

After putting the 4 IBM files in CLUIS_DIR and naming according to the above specifications, the CONVERT_IBM_DATA_SOURCES can be
executed by typing the following command at the $ prompt:

```
SUBMIT /KEEP/NOTIFY DSK3:[BOWEN.CLUIS]CONVERT_IBM_DATA_SOURCES
```

When the job is complete there will be a log file in the login directory, CONVERT_IBM_DATA_SOURCES.LOG. This log file should be examined for a message at the bottom that says:

"IBM DATA SOURCES CONVERTED SUCCESSFULLY. PERFORM STEP 2."

If this message does not appear, call Bowen and Hayes at 451-8403
and the company will analyze and solve the problem.

Once the files from the IBM have been converted into a format that makes them usable for random access (direct lookup of records by parcel number), the second command stream can be run, and this creates a complete CLUIS data base in precisely the format required for processing using the dBase data access facility on the PC.

```
**********************************************************
Second Stream
**********************************************************
$!* Comments *

$!*  Procedure name:CREATE_CLUIS
$!*  Creation Date: December 1, 1988
$!   *Author: John Bowen, Bowen & Hayes, Inc.
$!*
$!*  This command procedure creates a CLUIS data base. It accesses
     simultaneously the following data sources:

$!*       CRCE_FILE  -  Assessing Department Commercial Data
          Characteristics File*
$!*       FIRES_FILE - Extract from City MIS Fire Alarm File
$!*       ISD_FILE - Extract from City MIS Inspectional Services
          Permits File
$!*       MAIL_ADDRESSEE_FILE - Assessing Department Mail Addressee
          File
$!*       MAIL_ADDRESS_FILE  -  Assessing  Department  Mail  Address
          File
$!*       PARCEL_FILE - Assessing Department Parcel File
$!*       RENT_EQUITY_FILE - Extract from City MIS Rent Equity File
$!*       SALES_FILE - Assessing Department Sales File
$!*       TAX_TITLE_FILE - Extract from City MIS Tax Title File
$!*       TAXBILL_FILE - Assessing Department current Taxbill File

$!*       VALFIL_FILE - Assessing Department Commercial Values File

$!*       The Sigma Residential Inventory File

$!*  This command procedure creates the following files which port
     directly to the DELL 386 dBase system at the BRA and form 11
     of the 13 files in the CLUIS data base

$!*       CLUIS_ADDRESSEE_FILE - Mail addressees other than the
          primary owner.
$!*       CLUIS_COMMERCIAL_FILE - Commercial data characteristics.
$!*       CLUIS_FIRES_FILE - Building fires.
$!*       CLUIS_ISD_FILE - Permits.
$!*       CLUIS_MAIL_FILE - Mail addresses.
$!*       CLUIS_PARCEL_FILE - Parcel inventory.
$!*       CLUIS_RENT_EQUITY_FILE - Rent equity data (rent control,
          etc.).
$!*       CLUIS_RESIDENTIAL_FILE  -  Residential  data
          characteristics.
$!*       CLUIS_SALES_FILE - Sales.
$!*       CLUIS_TAX_FILE  -  Valuation  and  tax  data  for  years
          '85-'89.
$!*       CLUIS_TAX_TITLE_FILE - Open tax title accounts.
$!*
$!**********************************************************
```

```
$!* Commands *
$          ON ERROR THEN GOTO ERROR_HANDLER
$          ASSIGN DRC0:[BOWEN.CLUIS] CLUIS_DIR:
$          SET DEFAULT CLUIS_DIR:
$          @CLUIS_LOGICALS
$          WARDS_TO_PROCESS := 'P1'
$          TAX_YEAR := 'P2'
$!*
$          DELETE /LOG *.CLUIS_DATA;*
$          RUN CLUIS_DIR:CREATE_CLUIS_DATA
$!*
$!*****************************************************************
$!* Comments *
$!*  The CLUIS_TAX_FILE contains at this point tax data from only
     the current taxbill file.  The purpose of the rest of this
     procedure is to include tax data from years going back to
     fiscal '85.  This tax data has to be restored to the VAX
     system from tape (the Assessing Department does not keep back
     years of tax data on-line).
$!*
$!*****************************************************************
$!* Commands *

$          ASSIGN DSK3:[RESTORE]TAXBILL85.IDX TAXBILL_FILE
$          TAX_YEAR = "85"
$          RUN CLUIS_DIR:INTEGRATE_85_TAX
$!*
$          ASSIGN DSK4:[RESTORE]TAXBILL86.IDX TAXBILL_FILE
$          TAX_YEAR = "86"
$          RUN CLUIS_DIR:INTEGRATE_TAX
$!*
$          ASSIGN DSK0:[RESTORE]TAXBILL87.IDX TAXBILL_FILE
$          TAX_YEAR = "87"
$          RUN CLUIS_DIR:INTEGRATE_TAX
$!*
$          ASSIGN DSK3:[RESTORE]TAXBILL88.IDX TAXBILL_FILE
$          TAX_YEAR = "88"
$          RUN CLUIS_DIR:INTEGRATE_TAX
$!*
$          SORT TAX.CLUIS_DATA/KEY=(POS:1,SIZE:10,NUMBER:1) -
               /KEY=(POS:11,SIZE:2,NUMBER:2)/STAT TAX.CLUIS_SORT
$          RENAME TAX.CLUIS_SORT TAX.CLUIS_DATA
$          PURGE CLUIS_TAX_DATA
$          WRITE SYS$OUTPUT "CLUIS CREATION SUCCESSFUL."
$          EXIT
$          ERROR_HANDLER:
$          WRITE SYS$OUTPUT "CLUIS CREATION UNSUCCESSFUL."
$          EXIT
$!*************************************************************
```

This command stream is executed by submitting the following command at the $.

```
S U B M / N O T / K E E P
DSK2:[BOWEN.CLUIS]CREATE_CLUIS/PARAMS=(param1,param2)
```

where:

param1 = "wa.wb.wc...wn"
and wa,wb,wc...wn are specific ward numbers, e.g. 01,02.

Note that the value of "" for this parameter indicates that the user wants to process all wards in the city.

param2 = the fiscal year of the current on-line taxbill file, e.g. "89"

Following completion of the job, there will be a log file in the login account. At the bottom of this file should appear:

"CLUIS CREATION SUCCESSFUL."

If this message does not appear, call Bowen and Hayes at 451-8403 and the company will analyze and solve the problem.

## Updating the Zoning Board of Appeals File

The Boston Redevelopment Authority maintains files of Zoning Board of Appeals cases. The files include the materials submitted by the appellant and BRA documents regarding related zoning regulations and recommendations for or against a zoning variance.

Updating the BRA's Zoning Board of Appeals file involves finding information on the documents, entering the data into the dBASE file, and finding a parcel identification number (PID) for each record from Assessing files. The BRA Research Department's Assessing files in dBASE include owner, address, and PID. In most cases, matching addresses or owners produces a PID. In some cases, the address given by the appellant does not match an Assessing address and the appellant name does not match owner names in the vicinity of the given address for the given land use. Cases without PIDs cannot be used in the CLUIS system. Such cases were excluded from the data base.

Clark Broida, who designed the file, wrote a helpful document on the contents of the file. See also the CLUIS data dictionary.

## Updating Zoning District Information in the CLUIS System

All parcels in East Boston displayed on planimetric maps were assigned a zoning district based on zoning maps in the BRA. The respective zoning districts were entered into the field survey file (EBFLDSUR.DBF) for each parcel. If zoning districts change or if new parcels are created, data would need to be corrected or entered into the field survey file.

## Correcting Data in CLUIS Files

Examination and analysis of the CLUIS data files and the field survey in August 1988 revealed a few errors in the data base. In the field survey, staff made corrections in March 1988 parcel data from the Assessing Department. The attached list of discrepancies between the March file and the field survey should be reviewed when new data are brought into the CLUIS system from the Assessing Department. The field survey was not correct for every parcel, but the Assessing data were out of date or inaccurate in many cases.

When using the data in the computer mapping system, the staff found errors in Ward/Precinct/Block for 13 parcels:

Using a coverage in which parcels had been dissolved to WPB (the DISSOLVE command in ARC/OVERLAY removes lines between adjacent parcels with identical WBPs). Parcels that had maverick WPBs emerged within recognizable blocks (employing the Intergraph block map) were checked against adjacent parcels for WPB. In most of the thirteen cases, the WPB differed by one digit from what appeared

to be the correct WPB. The following changes were made to the CLUISPAR.DBF file and the PAT files.

| Test Plot Ref. | PID | EBL2# | Initial WPB | Corrected WPB |
|---|---|---|---|---|
| A | 0104651000 | 6535 | 0112095 | 0101045 |
| C | 0105533000 | 4988 | 0104005 | 0104025 |
| D | 0100318000 | 3540 | 0110055 | 0110050 |
| E | 0100145000 | 3096 | 0109040 | 0110010 |
| F | 0100184000 | 2551 | 0109045 | 0109040 |
| G | 0100247000 | 2432 | 0107050 | 0109050 |
| H | 0101192000 | 1959 | 0111105 | 0111110 |
| I | 0101659000 | 843 | 0113060 | 0113025 |
| J | 0103680001 | 1020 | 0108005 | 0108070 |
| K | 0105398010 | 5605 | 0101035 | 0103035 |
| N | 0104398100 | 1360 | 0112190 | 0112090 |
| P | 0102290000 | 30 | 0114025 | 0114021 |
| Q | 0101035000 | 1188 | 0101030 | 0111030 |

These corrections were important to make because geography such as the airport periphery has been defined based on blocks.

The ideal process for corrections of data is to make corrections at the source. The CLUIS staff is sending a list of parcels that may have errors to the respective Departments that maintain the files. After the data is corrected at the source, current data brought into the CLUIS system will be ready to use without making the earlier corrections again.

The data in the CLUIS system cannot be completely accurate. Human error, to a small degree, shows up in data entered into the source files, and in field surveys. Some inaccurate data show up during analysis and plotting, but some remain undiscovered. For example, an incorrectly coded land use, say vacant land, could be spotted by a person looking for commercial property in familiar parts of a neighborhood. However, something like an incorrect

gross floor area in a commercial property could go undetected for years.

John Bowen

Jeff Brown

June 1989

## VII. DATA DOCUMENT FOR THE CLUIS SYSTEM

### THE CLUIS DATA BASE

The purpose of the CLUIS project is to assemble parcel-based information from public records and field surveys into a single data base on a microcomputer; to create easy access to the information for inquiries from planners and planning advisory groups; to graphically display information in a microcomputer-based geographic information system; to analyze land use patterns revealed by the data manipulation and graphic display. This section of the Data Document includes the size, origin, acquisition, organization, and brief descriptions of the data.

#### Size of the Data Base

Information on land use in one of Boston's neighborhoods--East Boston--has been used to develop a prototype system on microcomputers. The CLUIS data base for East Boston consists of 7,096 records, with 100 items for each record. The size of data base in dBASEIII is 20 megabytes. East Boston comprises one entire ward and one planning district; the City of Boston is divided into 22 wards and 16 planning districts.

#### Origin of the Data

Most of the data were obtained from four departments of the City of Boston: Assessing, Inspectional Services, Rent Equity Board, and the Fire Department. All data from these departments are public information. Each department maintains its own files.

One file of information, on cases of the Zoning Board of Appeals, was obtained from records in the Boston Redevelopment Authority's Neighborhood Planning and Zoning Department.

Two files were created from field inspections in East Boston between July and December, 1988. One file was a verification of Assessing Department data plus observations about current land use of parcels. This is public information. The other file was a business survey of firms in East Boston. The data in the latter are confidential and will be reported only in aggregate to avoid disclosing information about particular business establishments in East Boston.

The key source of data for the CLUIS geographic information system is a boundary file for East Boston from the city's Management Information Systems Department (MIS). The file contains all parcel lines and street names. This is described in Appendix 2.

With the exception of field survey data, all data are currently available for any and all of Boston's 22 wards. Only East Boston data are incorporated into the system to date.

**Acquisition of the Data**

Data files were obtained from various city departments through the city's MIS. The files were loaded on the Assessing Department's VAX. Eleven files were compiled by the CREATE_CLUIS command stream that runs on the Assessing VAX:

CLUIS_ADDRESSEE_FILE

CLUIS_COMMERCIAL_FILE

CLUIS_FIRES_FILE

CLUIS_ISD_FILE

CLUIS_MAIL_FILE

CLUIS_PARCEL_FILE

CLUIS_RENT_EQUITY_FILE

CLUIS_RESIDENTIAL_FILE

CLUIS_SALES_FILE -

CLUIS_TAX_FILE

CLUIS_TAX_TITLE_FILE

The eleven files were then delivered on magnetic tape to the BRA. The tapes were loaded onto the BRA's VAX and sent through a network to the CLUIS 386 microcomputer.

The City's MIS downloaded the boundary/location file from Intergraph to diskettes in an ARC/INFO compatible format.

The field inspection files and the Zoning Board of Appeals file were created and updated, respectively, through keyboard entry.

The line data were obtained from the City's MIS on diskettes. See Appendix 3.

## Data Base Organization and Brief Description of Files

The hub file in the system is the CLUIS_PARCEL_FILE. This is an inventory of all the parcels in the area at the time of creation of the data base. For each parcel, the file contains current identifying data (parcel identification number, address, ward/precinct/block, land use, square footage, owner, tax status, etc.). Many simple parcel-based inquiries can be satisfied by accessing this complement of information. All of the other files in the system are associated with the CLUIS_PARCEL_FILE by means of the parcel identification number (PID). That is, each file as PID as the common field upon which the files may be linked.

Some files have one record per parcel, such as the CLUIS_PARCEL_FILE which contains current information only. Other files usually have multiple records, such as the CLUIS_TAX_FILE which has five records per parcel, one for each of the fiscal years since 1985. Some files, such as the CLUIS_FIRES_FILE, have records only for a subset of the parcels; fires did not occur on every parcel.

As indicated, with each parcel record goes a CLUIS_MAIL_FILE record. This is the mailing address for taxbill purposes as of the time of creation of the data base. For some of these mail records, the will be a CLUIS_ADDRESSEE_FILE record, if correspondence is to be sent to someone other than the primary owner. These files have value for projects that require communication by mail with the property owners in an area of focus.

The CLUIS_COMMERCIAL_FILE and CLUIS_RESIDENTIAL_FILE profile

the properties from the CLUIS_PARCEL_FILE, either as residential or commercial in their use. The CLUIS_RESIDENTIAL_FILE details the total number of rooms, bedrooms, baths, kitchens, and other building characteristics. Although the number of housing units is not explicitly stated, the land use code indicates whether the structure is a one- two- or three-family building. The CLUIS_COMMERCIAL_FILE details the primary use of each major building section for commercial properties, and gives information on the size and condition of the space. The number of dwelling units by bedroom-type are included in this file.

The CLUIS_SALES_FILE has all sales since 1983 in the geographic area of focus. Each record identifies the date of sale, sale price, the parties, and the property usage at the time of sale. The CLUIS_TAX_FILE has up to 5 years of taxbill records ('85 to '89) for each property defined in the CLUIS_PARCEL_FILE. Each taxbill record identifies the tax year, the assessed value of the property, the land use at the time of assessment, the owner of record as of the time of assessment, whether the property was owner occupied at the time of assessment, and other information which is useful for profiling the property on specific dates in the past (e.g. 01/01/84, 01/01/85, 01/01/86, 01/01/87, 01/01/88).

The CLUIS_TAX_TITLE_FILE contains all of the tax title properties at the time of creation of the data base.

The remaining files augment the parcel profiles by adding data on rent equity, fires, and permits. The CLUIS_RENT_EQUITY file has information on the numbers of rent controlled and vacancy

decontrolled units in each property for which the appropriate forms have been filed with the City Rent Equity Board.

The CLUIS_FIRES_FILE contains information on all building fires in the area of focus going back to 1986 when the data source (BFD Fire Alarm File) was established on the City's mainframe computer.

The CLUIS_ISD_FILE contains data on all of the building permits issued from 1985 through 1988, including estimated cost, permit fee, and descriptions of the work permitted.

Detailed definitions of these files and the CLUIS code sets are included in the Data Dictionary (Appendix 2).

**Quality of the Data**

The quality of the data varies, but in general the data appear to be accurate and complete. The key item in the system is the parcel identification number (PID). The PID field is complete in the eleven files compiled through the Assessing VAX. PID appears to be accurate as indicated by parcel maps provided by the City's MIS.

The Zoning Board of Appeals file presented problems for parcel identification. The PARCELNUMB field was not complete in the file, and the field's type was numeric instead of character and its width was 4 characters instead of 10. The latter meant that the sub-parcel number could not be specified and the ward number could not be included. These problems were partly remedied by looking up addresses and applicants from the Zoning Board of Appeals file in the CLUIS_PARCEL_FILE (addresses and owners). This revealed PIDs

for all but a few of the properties in the Zoning file. However, that exercise uncovered inconsistencies in address designations between the Assessing Department files and other files. In general, the data in the Zoning Board of Appeals file are reasonably complete and accurate.

The Assessing Department's address for a particular parcel does not necessarily coincide with the owner's understanding of the street address. This is relevant when the owner is filing an appeal with the Zoning Board or a permit application with Inspectional Services, for example. Lots on street corners are especially prone to inconsistency: for instance, the Assessing Department lists parcel '0101143000' on 93 Moore Street, while the applicant to the Zoning Board listed the same parcel as 54 Homer Street. Further, many vacant and exempt properties lack a street number in the Assessing files. While vacant properties would not receive mail, the absence of a street number greatly complicates field survey work and land use analysis. In some instances, the Assessing Department files lacked a street number when the Zoning file had a street number for the same parcel.

The Assessing Department files proved to be reasonably accurate in terms of land use codes. The field inspection, which included verification of Assessing land use data, came up 335 discrepancies, or less than five percent of all parcels. The sources of error were probably a combination of Assessing data entry error, field survey error, and changes between the time of the creation of the Assessing parcel file used for the survey

(March 1988) and the survey itself (July and August 1988), and between the field survey and the current Assessing file (January 1989).

The Assessing Department's parcel file contained 13 entry errors in the Ward/Precinct/Block field (WPB), for a 0.2 percent error. The incorrect entries were found by plotting the dissolved blocks. That is parcel lines were dissolved for parcels that had common WPB identifiers. Parcels that were mislabelled for WPB were isolated by the surrounding parcels that were labelled correctly.

In general, the Assessing Department files were clean and reasonably complete, even for detail on structures. Outside of Assessing, the Fire Department file appeared to be accurate. The Inspectional Services file was not as clean or complete as the Assessing data. Many of the fields in CLUIS_ISD_FILE were not usable in the projects data base due to inconsistent format. In particular, some fields included commas or quotes within the fields, which made delimiting fields for use in ARC/INFO impossible. For example, applicants names were entered as 'James O'Reilly' in some instances, and work descriptions often were entered as 'extended porch,sidewalk.'

Data from the Rent Equity Board were incomplete. Because the burden of responsibility for filing the forms is left with the property owner, and there is no immediate consequence for not filing (unlike for example the consequence of not paying one's tax bill!), the quality of this data is questionable. Perhaps when CLUIS is more widely known as an integrated information source,

there will be incentive to scrutinize the quality of this data set.

Jeff Brown

John Bowen

June 1989

## VIII. PROJECT EVALUATION

The major elements of the project were completed on time and the land use information system was working as expected. The demonstrations of the system went well. The CLUIS Committee participated in the design of the system and began using it in the summer of 1989. The CLUIS staff and consultants overcame a number of technical problems to successfully bring a microcomputer geographic information system through design, development and testing. The products, though a bit short on examples until late in the summer of 1989, indicated successful implementation. The project finished with expenditures 17 percent below the budgeted amount. See the summary budget report, Appendix 4.

The main shortcomings and inefficiencies in the project stemmed from institutional bottlenecks and out of the ordinary procedures.

The bottleneck in the process of getting data from the sources in City Hall to the microcomputer in the BRA is the process of downloading of data from the BRA VAX through the Starlan network to the 386 computer. The BRA VAX is set up to service the BRA's Management and Budget Department. The task of downloading data to the Research Department is currently outside of the normal operating procedures of the BRA's small MIS staff. Depending on the timing of a request for downloading, the task can be burdensome for the MIS staff.

If the CLUIS system is going to be updated efficiently, the BRA needs to review its VAX set up, including software options for

downloading through a network.

The process of purchasing computer equipment for the CLUIS was at times tedious and inflexible. The purchase of the initial batch of equipment went smoothly. When the work program changed mid-project, the purchase of another batch of hardware and software took months longer than it should have taken. The questions of what had to go out to bid, and what could be obtained through the state contract system were resolved after months of uncertainty.

A more efficient, flexible purchasing process would have given the CLUIS staff more time to work on technical issues and produce analytic products from the system.

Massport's prompt reimbursement of the BRA when the latter submitted invoices was impressive and much appreciated by the BRA. Although Massport presumably has its own purchasing hurdles, the process of acquiring hardware and software might have been handled more efficiently by Massport directly, rather than the reimbursement process chosen.

In any case, too much CLUIS staff time was spent on purchasing issues and procedures, which took away from time available for system development and use.

Delays in the signing of the CLUIS Agreement in the spring of 1988 and a false start in June of that year put the project in jeopardy. Fortunately, enough student interns were still available for hire when the project started in July 1988 to complete the field survey before the end of the summer. However, the business survey, logically following the field survey, suffered by being

delayed until too late in the autumn. Potential respondents became particularly reluctant to participate in the survey after Thanksgiving.

The business survey was disappointing in its lack of business participation. The target businesses were particularly averse to responding to the survey. None of the park and fly lots participated, despite extra effort by the survey staff. Some of the East Boston businesses may have had something to hide and had no incentive to cooperate with the CLUIS survey. Many of the firms were too small to take time to participate in a fairly lengthy survey.

The work program called for interns to conduct the survey. A more experienced interviewer may have obtained more interviews for the given time. Even then, the given time was insufficient for the challenge of the airport-related businesses.

BRA interns had much greater success in a similar business survey in South Boston a year earlier. In retrospect, the expectations of the CLUIS Committee, the East Boston planner, and Massport may have been too high, and the survey may have asked for too much detailed information. If a simpler questionnaire had elicited more responses, the survey could have been more valuable for the questions that were included. The CLUIS staff did not quite find a balance between information desired by the multiple parties in the project and information that businesses would be able and willing to provide.

The CLUIS Committee did not keep up to speed with the

technical developments in the project. In the late spring of 1989, when products were emerging, the Committee did not meet often enough to understand and influence the development of system products. When the system was fully functional in July, the Committee took most of the summer off, and did not make much use of the system. The Committee and the BRA's East Boston planner did start to request information from the system late in the summer of 1989.

The BRA did not fully utilize the CLUIS hardware due to a change in work program necessitated by an absence of key BRA staff midway through the project. Most importantly, the PS/2 computer was not available to the CLUIS staff when it was needed, especially during May and June of 1989.

Appendices to the:

# East Boston Centralized Land Use Information System

# CLUIS

Final Report

To the CLUIS Subcommittee of

The East Boston Planning and Zoning Advisory Committee

Jeffrey Brown, Project Manager

Boston Redevelopment Authority
Policy Development and Research Department

Funded by the Massachusetts Port Authority

December 12, 1989

City of Boston
Raymond L. Flynn, Mayor

Boston Redevelopment Authority
Stephen Coyle, Director

Alexander Ganz, Assistant Director
Policy Development and Research

Massachusetts Port Authority
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Adel Foz, Director of Planning and Programming

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MEMORANDUM OF UNDERSTANDING

BY AND BETWEEN

MASSACHUSETTS PORT AUTHORITY

AND

BOSTON REDEVELOPMENT AUTHORITY

This Agreement (the "Agreement) entered into this 11th day of July, 1988, by and between the MASSACHUSETTS PORT AUTHORITY, a public body politic and corporate, duly organized and existing pursuant to Chapter 91 App. of the General Laws of Commonwealth of Massachusetts, having its usual place of business at 10 Park Plaza, Boston, Massachusetts (hereinafter "MASSPORT") and the BOSTON REDEVELOPMENT AUTHORITY, a public body politic and corporate, duly organized and existing pursuant to Chapter 121B of the General Laws of the Commonwealth of Massachusetts and having its usual place of business at City Hall Plaza, Boston, Massachusetts (hereinafter "BRA").

W I T N E S S E T H  T H A T:

WHEREAS, MASSPORT has allocated up to $168,000 for the design, development and completion of a Centralized Land Use Information Study ("CLUIS") for East Boston in accordance with a vote of the MASSPORT Board on May 15, 1986; and

WHEREAS, the BRA has agreed to assume overall responsibility for study design and management of CLUIS in connection with the on-going planning and rezoning process in East Boston; and

WHEREAS, the BRA, by a vote of its Board on April 21, 1988, authorized the Director to enter into an agreement with MASSPORT to receive up to $168,000 in funding for the design, development and completion of the East Boston CLUIS (the "Project");

NOW, THEREFORE, the parties hereto do mutually agree as follows:

1. The BRA shall conduct the Project in accordance with the East Boston CLUIS Work Plan, dated 1988, (hereinafter "Work Plan") attached as Exhibit A and incorporated by reference as part of this Agreement. The BRA hereby agrees not to make any change, revision, modification or deletion to the Work Plan unless the BRA provides written notice to MASSPORT for MASSPORT's approval of any such change, revision modification or deletion.

2. The Project shall commence on June 1, 1988 and shall be completed on or before May 31, 1989 (the "Duration of the Project").

3. The Project shall consist of four components:

Phase 1: Designing the System;
Phase 2: Expanding the System;
Phase 3: Using the System; and
Phase 4: Reviewing the Products.

At the commencement of each of the four phases of the project, BRA staff shall meet with MASSPORT staff to discuss Project design, technical issues and analysis. BRA staff shall be available to meet with MASSPORT staff throughout the Duration of the Project to discuss technical issues and to provide progress reports. BRA staff shall have full control and shall make final decisions on CLUIS data choices, study, design and analysis throughout the Duration of the Project.

4. MASSPORT shall disburse up to One Hundred Sixty Eight Thousand Dol ($168,000.00) to the BRA for the purpose of financing the Project, and to pay for c sultants, materials, use of equipment, analysis and programming in accordance with tasks outlined in the Work Plan and this Agreement.

5. MASSPORT shall make payments to the BRA, up to a total amount of One Hund Sixty Eight Thousand Dollars ($168,000), in accordance with monthly presentment of and invoices for payment from the BRA. Such presentments for payment may be sub ted on or before the last day of each month throughout the Duration of the Project shall provide an accounting of the costs incurred by the BRA for all consultants, ma ials, equipment purchases or rentals, and staff.

6. Any computer hardware (the "Equipment") purchased by the BRA for use in Project shall be the property of MASSPORT. The Equipment shall be utilized and m tained by the BRA for the Duration of the Project. The BRA shall deliver the Equip to Massport on June 1, 1989 except that the BRA may, by written notice to MASSP prior to May 31, 1989, extend the period of use of the Equipment for an additional of six (6) months, and at the end of such additional term deliver the equipment to MA PORT.

7. Upon completion of the Project, the BRA shall provide to MASSPORT a land report with thematic and cadastral maps and a business survey report (the "Work ducts"). It is agreed that the Work Products shall be the property of both the BRA MASSPORT, and in the event any other product results from the Project, including not limited to any database or research accumulated throughout the Duration of the ect, such product shall be the property of both MASSPORT and the BRA.

8. The BRA agrees to coordinate community review within the East Boston commu through the CLUIS Subcommittee of the East Boston Planning and Zoning Advisory mittee (the "PZAC Subcommittee"). The BRA shall invite representatives from MASSPORT and AIR, Inc., to serve on the PZAC Subcommittee. The PZAC Subcomm shall be comprised of equal representation from AIR, Inc. and the East Boston Plan and Zoning Advisory Committee. The BRA shall make the CLUIS database availabl community review through the PZAC subcommittee, in accordance with the Work Plan.

9. BRA staff shall perform analysis, mapping and community liaison tasks. The shall also retain the professional services of Bowen & Hayes, Inc. to coordinate project for an amount not to exceed Forty Five Thousand Dollars ($45,000), in accord with the terms of the Contract for Professional Services between the BRA and Bow Hayes, Inc., which shall be executed substantially in the form attached hereto as Ex B.

10. The BRA agrees to use its own microcomputer land information system for storage and analysis via data transfers from mainframe-based data sources in the Ci Boston Department of Management Information Systems ("MIS") and the Assessing De ment.

11. The BRA shall execute a contract with MIS, substantially in the form att hereto as Exhibit C, to obtain programming services in connection with the transf data from MIS to the BRA. The BRA shall pay MIS an amount not to exceed Five sand Dollars ($5,000) in accordance with the terms of such contract.

12. All notices, approvals, statements, reports and other documents requir permitted to be given under this Agreement shall be in writing, signed by a duly au

zed representative of the party and shall be deemed delivered if mailed to the principal office address of the party to which it is directed. The addresses are as follows:

MASSPORT: Massachusetts Port Authority
10 Park Plaza
Boston, Massachusetts 02116
ATTENTION: Mr. George O'Brien, Secretary-Treasurer

BRA: Boston Redevelopment Authority
One City Hall Square / 9th Floor
Boston, Massachusetts 02201
ATTENTION: Mr. Alexander Ganz
Assistant Director, Policy Development & Research

13. The provisions of this Agreement shall be binding upon and shall inure to the benefit of the successors and assigns of the public body or bodies succeeding to the interest of the BRA and MASSPORT.

14. The BRA acknowledges its commitment to the principles of affirmative action, non-discrimination and equal employment opportunity, as evidenced by the approval of an Affirmative Action Plan by the BRA Board on July 16, 1987. Relevant portions of such Affirmative Action Plan are attached as Exhibit D.

IN WITNESS WHEREOF, each of the parties has caused this Agreement to be executed by its officers duly authorized as of the day first above written.

MASSACHUSETTS PORT AUTHORITY

By: _____
David W. Davis, Executive Director

Approved as to Form:

BOSTON REDEVELOPMENT AUTHORITY

_____
Chief General Counsel
Boston Redevelopment Authority

By: _____
Stephen Coyle, Director

APPENDIX 2

DATA DICTIONARY FOR THE CLUIS SYSTEM

Detailed File Definitions
and Code Sets for CLUIS

The CLUIS file definitions are presented by name in alphabetical order.

Each data file has a description, followed by the record layout with four columns: field name as it appears in the dBASE file, ordered alphabetically; type of field: numeric (N), character (C), or date (D); the length of the field in number of characters; and a description of the contents.

File name: Addressee File

Description: The person designated to receive tax bills and other mail from the City Assessing Department. If there is no addressee the mail is sent to the owner (see Mail File below, which includes a flag if an addressee exists). Data are current.

Record Layout:

| Field name | Type | Length in characters | Description |
|---|---|---|---|
| PID | C | 10 | Parcel identification number, a common field in all files. The first two digits represent the Ward number; the next five digits are the parcel number; and the last three digits are the sub-parcel number. For example, a PID = '0104425000' may have a sub-parcel = '0104425001'. PIDs are unique, and all land parcels should have a PID. The PID has been trimmed to 8 characters in some related CLUIS files, excluding the ward number. |
| ADDRESSEE | C | 50 | Mail addressee. |

File name: Commercial Data File

Description: The commercial data record is composed of fields selected for each commercial or exempt parcel from the commercial data characteristics file (CRCE) of the Assessing Department. Apartment buildings and mixed-use properties (residential/commercial) are included in this file. Exempt parcels include all publicly owned property as well as churches, and schools. Many of the parcels have multiple structures or building sections for which data are separated. Parcels with fewer than three dwelling units would have a residential record, but not a commercial record. Data are current.

Record Layout:

| Field name | Type | Length in characters | Description |
|---|---|---|---|
| PID | C | 10 | Element common to all files. Ward(2), Parcel(5), Sub-parcel(3). See description in Addressee File. |
| PRIMOCC | C | 4 | Primary occupancy, using state codes for occupancy, the same as the PROPTYPE field in the parcel file. See occupancies code set. |
| STORYHT1 | C | 6(4) | Story height; four characters; up to 6 occurrences depending upon the number of building sections. (Fractional values allowed, e.g., 4.5 stories.) Storyht2, Storyht3, etc. |
| STRCLS1 | C | 6(1) | Structure class; one character; up to 6 occurrences. Allowable values include:<br>A - Fire-proofed, steel-framed construction<br>B - Reinforced concrete-framed construction<br>C - Masonry-walled construction<br>D - Open wood and/or steel-framed construction with non-masonry walls |

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|---|---|---|---|
| EXTWALL1 | C | 6(2) | Exterior wall; two characters; up to 6 occurrences. Allowable values include:<br>01 - Brick<br>02 - Stone<br>03 - Poured concrete<br>04 - Pre-cast concrete<br>05 - Concrete and glass panels<br>06 - Metal and glass panels<br>07 - Stone/marble panels<br>08 - Stucco<br>09 - Wood siding<br>10 - Aluminum/vinyl siding<br>11 - Metal siding<br>12 - Concrete block<br>13 - Brick sill and cont. sash<br>14 - Hollow tile<br>15 - Corrugated siding<br>16,17 - Other |
| FRSTGFA1 | N | 6(6) | First floor - gross floor area. Up to 6 occurrences. |
| BASESIZE1 | N | 6(2) | Basement size expressed as a percentage of first floor gross floor area. Up to 6 occurrences. |
| BASEUTIL1 | C | 6(1) | Basement utility; up to 6 occurrences.<br>Allowables include:<br>0 - Unsound, practically useless, or no basement<br>1 - Poor condition<br>2 - Fair condition<br>3 - Good condition<br>4 - Good condition, finished or semi-finished<br>5 - Good condition and finished |
| TOTALGFA | N | 10 | Total gross floor area on the parcel. Format PIC 10(9). |

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|---|---|---|---|
| YEARRNV1 | N | 6(2) | Year last renovated; up to 6 occurrences. Last two digits of the year. |
| CONDRTNG1 | C | 6(2) | Condition rating; up to 6 occurrences. Allowable values include:<br><br>EX - Excellent<br>VG - Very good<br>G - Good<br>AV - Average<br>F - Fair<br>P - Poor<br>VP - Very poor<br>US - Unsound |
| STATUS1 | C | 6(1) | Current status of the building section; up to 6 occurrences. Allowable values include:<br><br>A - Abandoned<br>P - Partially abandoned<br>B - Burnout<br>R - Renovations and/or major additions<br>C - New construction and/or major additions<br>O - Not applicable |
| OCCUP1 | C | 8(3) | Current occupancy of the building; up to 8 occurrences. See occupancies code set. |
| NOUNITS1 | N | 8(7) | Number of units, with type of unit defined below; up to 8 occurrences (1-3000000) |

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|---|---|---|---|
| UNITTYPE1 | C | 8(3) | Type of unit; up to 8 occurrences. Allowables include:<br><br>GFA - Gross floor area<br>NRA - Net rentable area<br>ITM - Number of items<br>SFL - Square feet of land<br>ACL - Acres of land<br>0BR - Efficiency/Studio apartments<br>1BR - 1 bedroom apartments<br>2BR - 2 bedroom apartments<br>3BR - 3 bedroom apartments<br>4BR - 4 bedroom apartments |

File name: Field Inspection File

Description: Selected data from Assessing Department verified by field inspection, and observed data. Field inspection conducted July and August, 1988. All parcels included.

Record Layout:

| Field name | Type | Length in characters | Description |
|---|---|---|---|
| PID | C | 10 | Element common to all files. Ward(2), Parcel(5), Sub-parcel(3) |
| STNO | N | 3 | Street number. |
| STNAME | C | 20 | Street name. |
| OWNER | C | 30 | Owner name. |
| LANDSF | N | 10 | Land area of the parcel in square feet. |
| LANDUSE | C | 4 | Assessor's code for land use. In some CLUIS files this is called LANDUSE_FLD to distinguish it from land use data in the tax, sales and parcel files. |
| PROPTYPE | N | 3 | State code for land use. |
| SITECOND | N | 4 | Site condition as judged by field inspectors, values 1 to 8. |
| AIRPORT | C | 2 | Airport-related business on parcel,yes or no. |
| PKG | C | 2 | Off-street parking on the parcel, yes or no. |
| NOSPACES | N | 4 | Number of off-street parking spaces on parcel. |
| APP | C | 2 | Parcel in CLUIS-defined airport periphery, yes or no. Periphery is based on Assessor's blocks (WPB). |

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| ZONING | C | 8 | Zoning district in which the parcel is located. See the Zoning Board of Appeals file, below, for definitions of districts. |

File name: Fires File

Description: Selected data on all building fires (incident type 110); the data cover 1986 to present.

Record Layout:

| Field name | Type | Length in characters | Description |
|---|---|---|---|
| PID | C | 10 | Element common to all files. Ward(2), Parcel(5), Sub-parcel(3) |
| FIREDATE | D | 8 | Date of the fire (MM/DD/YY). |
| INGFACTOR | C | 2 | Cause of the fire (see ignition factors code set). |
| ESTLOSS | N | 8 | Estimated damage from the fire in dollars. Format PIC 9(8). |

File name: ISD (Inspectional Services) File

Description: Identifying information for all permits in the Inspectional Services database. The data include 1985 -1989.

Record Layout:

| Field name | Type | Length in characters | Description |
|---|---|---|---|
| PID | C | 10 | Element common to all files. Ward(2), Parcel(5), Sub-parcel(3) |
| PERMITTYPE | C | 2 | See permits code set. |
| APPDATE | D | 8 | MM/DD/YY |
| ISSUEDATE | D | 8 | MM/DD/YY |
| PERMITNO | C | 10 | The number of the permit assigned by the department. The format is TT-FY-NNNN where<br>TT = permit type<br>FY = Fiscal year<br>NNNN = 4 digit id |
| ESTCOST | N | 11 | Construction cost. This data is not always available, and it is possible to extrapolate it from the fee that follows. |
| FEE | N | 5 | This permit fee is 0.7 percent of the construction cost for the first $100,000 and 1.0 percent of the remainder. |
| APPNAME | C | 30 | Name of permit applicant. |
| COMPNAME | C | 30 | This is the builder. |
| LICENSENO | C | 7 | This is the builder's license number and may be useful for performing scans. |
| LOCATION | C | 34 | This is the property location in the opinion of the ISD. |
| AREA | C | 15 | A non-descript text field. |

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|---|---|---|---|
| BLD_REF | C | 15 | A non-descript text field. |
| FLRS | N | 4 | The number of floors involved (format 99.9). |
| DESCRIPTION | C | 120 | A description of the work. This field contains commas which make it difficult to use. |
| INSPECTION_DATE | D | 8 | Date of last inspection, MM/DD/YY. |

File name: Mail File

Description: The current mail address used by the Assessing Department for tax bills and other mailings to the taxpayers. Data are current.

Record Layout:

| Field name | Type | Length in characters | Description |
|---|---|---|---|
| PID | C | 10 | Element common to all files.Ward(2), Parcel(5), Sub-parcel(3) |
| STREETADD | C | 31 | Mailing street address. |
| CITYSTATE | C | 17 | Formatted CITY(14), SPACE (1),STATE(2). |
| ZIPCODE | C | 5 | Formatted pic 9(5). |
| ADDRESSEE | C | 1 | (Y) - indicates the presence of a mail addressee record. |

File name: Parcel File

Description: Identifying information for each parcel in the database. This is the file upon which all other files depend. There will be one record in this file per parcel. All of the data elements are from the Assessing Department Ownership History Parcel File except where explicitly stated otherwise. The data are current.

Record Layout:

| Field name | Type | Length in characters | Description |
|---|---|---|---|
| PID | C | 10 | Element common to all files. Ward(2), Parcel(5), Sub-parcel(3) |
| WPB | C | 7 | Ward(2), Precinct(2), Block(3). |
| STRNO | C | 7 | Right justified, street number for parcel location (e.g. 6 is the street number for 6 COTTAGE STREET). This is the first of 7 parts to the address. Note that many parcels do not have a street number (mostly vacant or exempt property). |
| STRNOSUFF | C | 7 | Left justified, street number suffix for parcel; for example, -123 is the suffix for 121-123 BENNINGTON STREET. These are not always complete and accurate. |
| STRNOPREF | C | 4 | Left justified; a valid street name prefix would be ST in the address 114 SARATOGA STREET. |
| STREETNAME | C | 25 | Street name as specified in the Ownership History Parcel record street name field. |

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|---|---|---|---|
| STRNAMESUF | C | 4 | Street name suffix as specified in the Ownership History Parcel record street name suffix field. These are values such as ST for "STREET", "PL" for "PLACE", etc. |
| CITY | C | 15 | The city in which the parcel is located (e.g. EAST BOSTON, ROSLINDALE, SOUTH BOSTON). |
| ZIPCODE | C | 5 | The zip code of the parcel. Pic 9(5). |
| EXEMPTCODE | C | 2 | Blank in the case of a taxable parcel. Indicates the specific category of exempt property. See exempt codes set. |
| SQRFOOT | N | 12 | Square footage of land, or unit (in the case of a condo). |
| OWNER | C | 28 | Name of current owner. |
| LOT_UNIT | C | 13 | Lot number in the case of a non-condo property. Otherwise condo unit number. |
| ASSDISTR | C | 4 | Residential Assessment District for non-condo residential properties; commercial assessment district for commercial property; Condo assessment district for condo property. All districts taken from the Valfil file in the Assessing database. |
| LANDUSE | C | 2 | Land use of property. Source is the Legal Location File. See land uses code set. In some CLUIS files this is named LANDUSE_PAR to distinguish it from land use data in the tax, sales, and field inspection files. |

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|---|---|---|---|
| OWNOCCUP | C | 1 | Property is lived in by the owner. Source is the Sigma System Parcel record for residential/condo records, and the Valfil File RXMP field for other types of property. |
| TRACINGNUM | C | 8 | Identifier for the Assessing Engineer's maps. Source is the Assessing Department Tracing File. |

File name: Rent Equity File

Description: This record is comprised of fields selected from the Rent Equity File supplied to the project by the Rent Equity Board. The data are current, but incomplete for many records.

Record Layout:

| Field name | Type | Length in characters | Description |
|---|---|---|---|
| PID | C | 10 | Element common to all files. Ward(2), Parcel(5), Sub-parcel(3) |
| LASTACTDTE | D | 8 | The last date for which the record was updated by the Rent Equity Board (MM/DD/YY) |
| BLDREG | C | 1 | Is the building registered, Y/N |
| RENTUNITS | N | 3 | Number of rentable units, right justified; appears to represent vacant units for rent. |
| RESUNITS | N | 3 | Number of residential units in the building, right justified. |
| RNTCNTRUNS | N | 3 | Number of rent-controlled units, right justified. |
| VACDECUNS | N | 3 | Number of vacancy-decontrolled units, right justified. |
| LOD_RMNGHS | C | 1 | Is the building a lodging or rooming house, Y/N |
| BUILEXEMP | C | 1 | Is the building exempt from rent control laws, Y/N |

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|---|---|---|---|
| EXEMPTSTAT | C | 1 | Exempt status; allowable values include:<br><br>G - Government<br>N - New construction<br>R - Rehabilitated<br>T - Other<br>H - Non-housing to housing<br>O - Owner occupied<br>S - Section 8 |
| ABANDONED | C | 1 | Is the building abandoned, Y/N |

File name: Residential Data File

Description: The residential data file is composed of fields selected for each parcel from the residential database of the Assessing Department. A parcel with one to three dwelling units has a residential data record. A parcel with four or more residential units has a commercial record. No parcels would have both a residential and commercial record. The data are current.

Record Layout:

| Field name | Type | Length in characters | Description |
|---|---|---|---|
| PID | C | 10 | Element common to all files. Ward(2), Parcel(5), Sub-parcel(3) |
| PRIMOCCUP | C | 4 | Primary occupancy. See occupancies code set. |
| STRYHEIGHT | N | 4 | Story height. Format 99.9 |
| EXTWALL | C | 2 | Exterior wall. Allowable values include:<br>B - Brick<br>V - Veneer<br>F - Frame/Clapboard<br>W - Wood shake<br>M - Aluminum/vinyl<br>A - Asbestos<br>P - Asphalt pitch<br>S - Stucco<br>O - Other |
| FIRSTGFA | N | 6 | First floor gross floor area in square feet. |
| TOTALFGA | N | 10 | Total gross floor area in square feet. |
| YEARREN | N | 2 | Year renovated, last 2 digits of the year. |

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|---|---|---|---|
| CONDRATING | C | 2 | Condition rating; allowable values include:<br><br>P - Poor<br>F - Fair<br>A - Average<br>G - Good<br>E - Excellent |
| STATUS | C | 1 | Allowable values:<br><br>A - Abandoned<br>P - Partially abandoned<br>D - Boarded and abandoned<br>B - Burnout<br>R - Renovations and/or major additions<br>C - New construction and/or major additions<br>N - Not applicable |
| TOTALROOMS | N | 2 | Total number of rooms in residential and condo properties. |
| TOTALBEDS | N | 2 | Total number of bedrooms in residential and condo properties. |
| OFFSTRPKG | N | 2 | Total number of off-street parking spaces for residential and condo properties. |
| PARKTYPE | C | 1 | Condo only, type of parking. Allowable values include:<br><br>N - None<br>E - Easement<br>D - Deeded |
| BASESIZE | N | 3 | Residential only-- basement size expressed as a percentage of first floor gross floor area. |
| BASEFINPCT | N | 3 | Residential only--finished basement area expressed as a percentage of total basement area. |

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|---|---|---|---|
| KITCHENS | C | 1 | Residential properties only--number of kitchens. |
| BATHS | N | 4 | Residential properties only--number of bathrooms, formatted 99.9. |

File name: Sales File

Description: Five years of sales (1983 - 1988) for properties defined in the Parcel file. All of the data elements are from the Assessing Department Sales File except where explicitly stated otherwise.

Record Layout:

| Field name | Type | Length in characters | Description |
|---|---|---|---|
| PID | C | 10 | Element common to all files. Ward(2), Parcel(5), Sub-parcel(3). |
| SALESDATE | D | 8 | Date of sale, MM/DD/YY. |
| BKPGCERT | C | 8 | Registry of Deeds page number or certificate number (for registered land). |
| CODES | C | 5 | Registry of Deeds book number. |
| GRANTOR | C | 53 | Name of the seller (Last-30, First-22,MI-1). |
| GRANTEE | C | 53 | Name of the buyer (Last-30, First-22,MI-1). |
| MULTISALE | C | 1 | Multi-parcel sale, Y/N. |
| LANDUSE | C | 2 | Property land use at the time of sale. See land uses code set. In some CLUIS files, this is named LANDUSE_SALE to distinguish between land use data in the tax, parcel, and field inspection files. |
| SALEPRICE | N | 8 | Sale price, PIC 9(8) format. |
| STASALECD | C | 2 | State sale code. Code values X,W,X1,W1,X2,W2,X3,W3 indicate that the sale is "arms length" and valid for valuation modelling purposes. |

File name: Tax History File

Description: This file provides relevant tax information for a property for a given fiscal year (tax years 85-89). All information has been taken from the tax bill files for these five years so the land use, lot size, districts, and other data on each record were relevant for the indicated fiscal year and may not reflect the current data for the property.

Record Layout:

| Field name | Type | Length in characters | Description |
|---|---|---|---|
| PID | C | 10 | Element common to all files. Ward(2), Parcel(5), Sub-parcel(3). |
| FY | N | 2 | The fiscal year of the information provided. The fiscal year starts July 1. |
| RESASSDIS | C | 4 | Residential assessment district, Pic 9(4). |
| COMMASSDIS | C | 4 | Commercial assessment district, Pic 9(4). |
| LOTSIZE | N | 9 | Area of the lot in square feet, Pic 9(9). |
| LANDUSE | C | 2 | The land use of the property. See land uses code set. In some CLUIS files, this is named LANDUSE_TAX to differentiate it from land use from the parcel, sales, and field inspection files. |
| PROPTYPE | C | 4 | The state class code defining the use of the property. This did not exist for tax year 85. See occupancies code set. |
| RESBLDVAL | N | 10 | The total value of buildings classified as residential. PIC 9(10) format. |

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|---|---|---|---|
| RESLANDVAL | N | 10 | The total value of land classified as residential. PIC 9(10) format. |
| COMBLDVAL | N | 10 | The total value of buildings classified as commercial. PIC 9(10) format. |
| COMLANDVAL | N | 10 | The total value of land classified as commercial. PIC 9(10) format. |
| INDBLDVAL | N | 10 | The total value of buildings classified as industrial. PIC 9(10) format. |
| INDLANDVAL | N | 10 | The total value of land classified as industrial. PIC 9(10) format. |
| EXEBLDVAL | N | 10 | The total value of buildings classified as exempt. PIC 9(10) format. |
| EXELANDVAL | N | 10 | The total value of land classified as exempt. PIC 9(10) format. |
| EXEMPTCODE | C | 2 | Classifies the particular category of exempt property. See exempt code set. |
| TAXTITLE | C | 1 | Y if property is in tax title. |
| RESEXEMPT | C | 1 | Y if property has a residential exemption. |
| TOTALTAX | N | 11 | Total tax bill, Format 9(8)V99. |

File name: Tax Title File

Description: This file contains all properties for which back taxes were owed at the time of creation of data base. These are current data.

Record Layout:

| Field name | Type | Length in characters | Description |
|---|---|---|---|
| PID | C | 10 | Element common to all files. Ward(2), Parcel(5), Sub-parcel(3). |
| FY | N | 2 | The fiscal year for the information provided. |
| ACCUMBAL | N | 10 | Accumulated balance, 9(8).99 format. |

File name: Zoning Board of Appeals File

Description: This file contains information for cases filed with the Zoning Board of Appeals from January 1985 through the present. This file is an extract of the file created by Clark Broida in 1987. The larger file is up-to-date and available to CLUIS if necessary.

Record Layout:

| Field name | Type | Length in characters | Description |
|---|---|---|---|
| PID | C | 10 | Element common to all files. Ward(2), Parcel(5), Sub-parcel(3). The Zoning Department's file has the 4-digit parcel number only. Those were expanded to include the ward and sub-parcel numbers for the CLUIS. |
| CASENUMBER | N | 5 | The Zoning Board of Appeals' identification number unique to each appeal case. |
| STRTNUMBER | N | 6 | The assigned street number of the parcel(s) involved in the appeal. The first part of a four-part street address. Note that parcel addresses in this file and in Assessing Department files may not match for a given PID, particularly for street corners. |
| STRTPREFIX | C | 8 | The directional part of the address such as North, South, East, West. |
| STREETNAME | C | 20 | The street name portion of the address. |
| STREETTYPE | C | 8 | The street classification such as Street, Avenue, Square,etc. |

| | | | |
|---|---|---|---|
| BOAHRINGDT | D | 8 | The date the appellant appears before the Board of Appeal and a decision is reached regarding the case. |
| BOADECSION | N | 2 | The Board decision regarding the case. The decisions are coded, recorded as:<br>1 = approved as-submitted;<br>2 = approved with provisions;<br>4 = denied without prejudice;<br>5 = denial;<br>6 = deferred decision;<br>7 = case withdrawn;<br>33 = two different decisions;<br>-1 = decision unknown. |
| IPODPERMIT | N | 2 | Does the case involve an IPOD permit? Recorded as: 1 = no; 2 = yes; -1 = do not know. |
| APPLICANT | C | 30 | The last name of the individual, or, the association, seeking a variance. |
| FNAME | C | 20 | The first name of a person seeking a variance. Only used if APPLICANT is an individual, not an association. |

| | | | |
|---|---|---|---|
| EXISTZONIN | C | 10 | The zoning district regulating the property involved in the variance request as designated by the Boston Zoning Code. This should be consistent with the ZONING field in the field inspection file. Possible values are: |

| | | |
|---|---|---|
| S-.3 | H-3 | B-8-120 |
| S-.5 | H-4 | B-8 |
| R-.5 | H-5 | B-10-155 |
| R-.8 | L-.5 | B-10 |
| H-1-40 | L-1 | M-1 |
| H-1-50 | L-2-65 | M-2 |
| H-1 | L-2 | M-4 |
| H-2-45 | B-1 | M-8 |
| H-2-65 | B-2 | I-2 |
| H-2 | B-3-65 | W-2 |
| H-3-65 | B-4 | |

-1 (do not know)

where the first number represents the ratio of floor area to lot area (FAR), and the second number represents building height restrictions.

| | | | |
|---|---|---|---|
| EXISTUSE | N | 3 | A coded land use classification of what the property is used for before the applicant filed for a variance. These are based on the general land use classifications of the Boston Zoning Board Section 8. In the case of legalizing a use, the existing use is coded as the use prior to the change that the applicant is attempting to legalize. Possible values are:<br>1 = housing<br>2 = office<br>3 = retail<br>4 = commercial<br>5 = education/institutional<br>6 = entertainment<br>7 = recreation<br>8 = mixed use<br>9 = parking<br>10 = vacant land<br>11 = other land use<br>-1 = unknown land use. |
| PRPSDUSE | N | 3 | A coded land use classification of what the applicant seeks to use the property for if the Board approves a zoning variance or conditional use permit. The same classifications are used as above for existing use. |
| CHNGEOCCUP | N | 2 | Does the case involve a change in building occupancy? Recorded as:<br>1 = yes; 2 = no; -1 = do not know. |
| CHNGEUSE | N | 2 | Does the case involve a change in building use? Recorded as:<br>1 = yes; 2 = no; -1 = do not know. This variable is essentially the same as CHNGEOCCUP because the Inspectional Services Department does not differentiate between the two variables. |

| | | | |
|---|---|---|---|
| LEGALIZE | N | 2 | Does the case involve a building use legalization? Recorded as: 1 = yes; 2 = no; -1 = do not know. |
| EXISTUNITS | N | 5 | The number of residential units that were on the property before the applicant filed for a variance. In the case of legalization, the number of units before the change for which the applicant seeks legalization. |
| PRPSDUNITS | N | 5 | The number of residential units proposed for the property if the Board approves the variance. |

Code set: Exempt Codes

Description: This table contains all exempt codes and their descriptions.

Record Layout:

| Field name | Length in characters |
|---|---|
| Code | 2 |
| Description | 78 |

Allowable values:

| Code | Description |
|---|---|
| 1 | United States |
| 2 | Commonwealth of Massachusetts |
| 4 | Incorporated agricultural societies |
| 5 | Incorporated organizations of U.S. veterans |
| 6 | Military |
| 7 | Fraternal societies (personal property only) |
| 8 | Retirement associations (personal property only) |
| 9 | Pension endowment associations |
| A | City of Boston schools |
| B | City of Boston fire stations |
| C | City of Boston all other property |
| D | City Hall and Annex |
| F | City of Boston parks and playgrounds |
| I | City of Boston libraries |
| J | City of Boston/by foreclosure |

Allowable values:

| Code | Description |
|---|---|
| K | Boston Housing Authority |
| L | City of Boston health facilities |
| M | City of Boston hospitals |
| N | Institutions |
| O | Boston Redevelopment Authority |
| P | City of Boston police facilities |
| R | City of Boston printing facilities |
| S | City of Boston public buildings and off street parking |
| T | City of Boston Public Works Department |
| U | City of Boston welfare facilities |
| V | City of Boston Public Facilities |
| 10 | Religious organizations (personal property only) |
| 11 | Parsonages |
| 12 | Cemeteries |
| 13 | Cemeteries (grave care - personal property only) |
| 14 | Water company charter exempt |
| 15 | Incorporated credit union (personal property only) |
| 16 | 1930 Chapter 86 American Red Cross |
| 17 | General Laws Chapter 59,Section 6, Town of Brookline |
| 18 | 1929 Acts, Crabtree, Lotta M. Estate |
| 19 | 1906 Chapter 223, Farm and trade schools |
| 1A | Foreign jurisdictions |
| 20 | Colonial Grant, Harvard College |

Exempt codes (continued)

Allowable values:

| Code | Description |
|---|---|
| 21 | 1870 Acts, Old South Church |
| 22 | General Laws Chapter 160,Section 87, Railroads |
| 23 | Massachusetts Hospital Service (Blue Cross/Blue Shield) Gen. Laws Chap 176A&B |
| 24 | Chapter 95 Acts of 1960 - Knights of Columbus |
| 29 | Commonwealth of Massachusetts (Mass State College) |
| 31 | Literary |
| 32 | Benevolent |
| 33 | Charitable |
| 34 | Scientific |
| 35 | Incorporated temperance societies |
| 39 | Commonwealth of Massachusetts (Mass Water Resources Authority) |
| 42 | Commonwealth of Massachusetts (Metropolitan Transit Authority) |
| 46 | Economic development corporations |
| 52 | Commonwealth of Massachusetts (Mystic River Bridge Authority) |
| 62 | Commonwealth of Mass. (Mass. Turnpike Authority) |
| 72 | Commonwealth of Mass. (Mass. Port Authority) |
| 82 | Commonwealth of Mass. (Mass. Parking Authority) |
| 92 | Commonwealth of Mass. (Metropolitan District Commission) |
| D2 | Commonwealth lease to City for parking areas |
| OO | Boston Redevelopment Authority Chapter 121a |

Code set: Land Use Codes

Description: This table contains all land use codes, their general property classes, and their descriptions.

Record Layout:

| Field name | Length in characters | Description |
|---|---|---|
| Code | 2 | Class 1R - Residential<br>IC - Commercial<br>E - Exempt |
| Description | 77 | |

Allowable values:

| Code | Class | Description |
|---|---|---|
| A | C | Apartment |
| C | C | Commercial |
| E | E | Exempt |
| I | C | Industrial |
| AH | C | Agricultural/horticultural |
| CC | C | Commercial Condominium |
| CD | R | Residential Condominium |
| CL | C | Commercial Land |
| CM | | Condo main |
| CP | R | Condo parking |
| EA | E | Clause 121a |
| RC | C | Mixed use |
| RL | R | Residential Land |
| R1 | R | Single family |
| R2 | R | Two family |
| R3 | R | Three family |
| R4 | C | Four to six family |

Code set: Ignition Factor Codes

Description: This table contains all ignition factor codes found for the property sample in question (there are many other codes as well) and their descriptions.

Record Layout:

| Field name | Length in characters |
|---|---|
| Code | 2 |
| Description | 78 |

Allowable values:

| Code | Description |
|---|---|
| 00 | None assigned |
| 11 | Incendiary |
| 21 | Suspicious |
| 30 | Misuse of heat of ignition |
| 31 | Abandoned, discarded heat source |
| 34 | Inadequate control of open fire |
| 35 | Heat source used or placed too close to combustibles |
| 36 | Children playing with heat sources |
| 39 | Misuse of heat of ignition |
| 44 | Washing part, cleaning, refinishing, painting with flammable liquid |
| 46 | Combustible placed too close to heat source |
| 47 | Improper storage procedures |
| 51 | Mechanical malfunction - automatic control failure |
| 53 | Mechanical malfunction - short circuit, ground fault |

Ignition Codes (continued)

Allowable values:

| Code | Description |
|---|---|
| 54 | Mechanical malfunction - part failure, leak, break |
| 55 | Mechanical malfunction - other electrical failure |
| 59 | Mechanical malfunction - not classified |
| 62 | Construction deficiency |
| 64 | Other installation deficiency |
| 69 | Design, construction, installation deficiency - not classified |
| 73 | Equipment unattended |
| 76 | Improper start up, shut down procedures |
| 78 | Equipment not being operated properly |
| 99 | Ignition factor not classified |

Code set: Occupancy Codes

Description: This table contains all occupancy codes and their descriptions. Data are current.

Record Layout:

| Field name | Length in characters |
|---|---|
| Code | 2 |
| Description | 78 |

Allowable values:

| Code | Description |
|---|---|
| 010 | condo: residential/commercial use |
| 012 | residential /open space use |
| 013 | residential /commercial use |
| 019 | residential /exempt use |
| 025 | one residential unit |
| 026 | two residential units |
| 027 | three residential units |
| 031 | commercial multi-use |
| 101 | single-family dwelling |
| 102 | residential condo |
| 103 | mobile home |
| 104 | two-family dwelling |
| 105 | three-family dwelling |
| 106 | residential ancillary improvement |
| 107 | other residential |
| 108 | condo parking (residential) |
| 109 | multiple buildings/1 lot |
| 110 | condo storage (residential) |
| 111 | apartments 4-6 units |
| 112 | apartments 7-30 units |
| 113 | apartments 31-99 units |
| 114 | apartments 100+ units |
| 115 | other apartment use |
| 116 | residential parking garage |
| 118 | elderly home |
| 121 | rooming house |
| 122 | fraternity |
| 123 | residence hall |
| 125 | subsidized housing section-8 |
| 126 | subsidized housing section-231d |

Occupancy codes (continued)

Allowable values:

| Code | Description |
|---|---|
| 127 | subsidized housing section-202 |
| 129 | other group housing |
| 130 | residential land |
| 131 | residential land (secondary) |
| 132 | residential land (unusable) |
| 202 | underwater land |
| 211 | non-productive land |
| 300 | hotel |
| 301 | motel |
| 302 | inn, resort |
| 303 | private city club |
| 304 | nursing /convalescent home |
| 305 | clinic, private hospital |
| 306 | laboratory (biological/medical) |
| 307 | veterinary hospital |
| 308 | other health care |
| 310 | laundry operation |
| 311 | laundromat /cleaner |
| 312 | mini-storage warehouse |
| 313 | lumber yard storage |
| 314 | truck terminal |
| 315 | piers, wharves, dock |
| 316 | warehouse |
| 317 | storage warehouse, garage |
| 318 | cold storage warehouse |
| 319 | retail strip center |
| 320 | retail/wholesale/service |
| 321 | discount store |
| 322 | department store |
| 323 | shopping center |
| 324 | supermarket |
| 325 | retail store detached |
| 326 | restaurant |
| 327 | restaurant/lounge |
| 328 | fast food restaurant |
| 329 | bar, tavern, pub |
| 330 | showroom (auto) |
| 331 | auto supply/service |
| 332 | repair/service garage |
| 333 | self-service station |
| 334 | service station |
| 335 | car wash (automatic) |
| 336 | commercial parking garage |
| 337 | parking lot |
| 338 | subterranean garage |
| 339 | car wash (self-service) |

Occupancy codes (continued)

Allowable values:

| Code | Description |
|---|---|
| 340 | office (attached) |
| 341 | bank |
| 342 | medical office |
| 343 | office 1-2 story |
| 344 | office 3-9 story |
| 345 | office 10-19 story |
| 346 | office 20-34 story |
| 347 | office tower 40 or more story |
| 348 | tower: bank use |
| 350 | postal service |
| 351 | educational facility |
| 352 | day care center |
| 353 | social club |
| 354 | mortuary, mausoleum |
| 355 | funeral home |
| 356 | commercial condo |
| 357 | retail condo |
| 358 | office condo |
| 359 | condo parking (commercial) |
| 360 | museum, gallery |
| 361 | night club |
| 362 | movie theater |
| 363 | drive-in theater |
| 364 | stage theater |
| 365 | auditorium/sport center |
| 366 | fieldhouse /arena |
| 367 | race track |
| 368 | fairground, park |
| 369 | other entertainment |
| 370 | bowling alley |
| 371 | ice skating (arena) |
| 372 | roller skating |
| 373 | swimming pool |
| 374 | health club |
| 375 | tennis/ racquet club |
| 376 | gymnasium/athletic |
| 377 | recreation building |
| 378 | other indoor use |
| 380 | golf course |
| 381 | tennis court(s) |
| 382 | stable(s) |
| 383 | swimming pool |
| 384 | boat house /marina |
| 386 | campground facility |
| 388 | other outdoor use |
| 389 | building: chapter 61b land |

Occupancy codes (continued)

Allowable values:

| Code | Description |
|---|---|
| 390 | commercial land |
| 391 | commercial land (secondary) |
| 392 | commercial land (unusable) |
| 393 | commercial ancillary building |
| 394 | greenhouse /barn /shed |
| 395 | air terminal |
| 396 | hangar: storage, maintenance |
| 397 | bus terminal |
| 398 | railroad terminal |
| 399 | other transportation |
| 400 | manufacturing (old) |
| 401 | warehouse: industrial |
| 402 | office: industrial |
| 403 | manufacturing (new) |
| 404 | light manufacturing/research & development/ engineering |
| 405 | industrial loft |
| 406 | computer equipment building |
| 407 | machine shop (small) |
| 408 | newspaper plant |
| 409 | other industrial |
| 410 | mining, quarrying |
| 412 | metal processing |
| 413 | auto salvage yard |
| 414 | food processing plant |
| 415 | bottling plant |
| 416 | cannery |
| 417 | dairy |
| 418 | other processing |
| 420 | tanks: above ground |
| 421 | tanks: under ground |
| 422 | electric power plant |
| 423 | electric transmission right-of-way |
| 424 | electric substation |
| 425 | gas manufacturing plant |
| 426 | gas pipeline right-of-way |
| 427 | gas storage |
| 428 | gas pressure station |
| 429 | other utility property |
| 430 | telephone exchange station |
| 431 | telephone relay tower |
| 432 | cable television facility |
| 433 | radio/television transmission facility |
| 435 | radio/television studio |
| 436 | studio /remote control |
| 439 | other communication |
| 440 | industrial land |

Occupancy codes (continued)

Allowable values:

| Code | Description |
|---|---|
| 441 | industrial land (secondary) |
| 442 | industrial land (unusable) |
| 445 | railroad property |
| 446 | steam/water/sewer |
| 450 | industrial condo |
| 965 | government office building |
| 970 | church, synagogue |
| 971 | rectory, convent |
| 972 | correctional building |
| 973 | administrative building |
| 974 | fire station |
| 975 | police station |
| 976 | school |
| 977 | college (academic) |
| 978 | library |
| 979 | hospital |
| 980 | water treatment plant |
| 981 | incineration plant |
| 982 | armory (military) |
| 983 | cemetery |
| 984 | public beach |
| 985 | other exempt property |
| 986 | other public land |
| 995 | condo main (master deed building) |

Code set: Permit Codes

Description: This table contains all permit codes and their descriptions. Codes relate to CLUISISD.DBF file.

Record Layout:

| Field name | Length in characters |
|---|---|
| Code | 2 |
| Description | 78 |

Allowable values:

| Code | Description |
|---|---|
| 01 | Permit to erect |
| 02 | Alter/repair/change occupancy |
| 03 | Permit to amend plans |
| 04 | Permit to use premises |
| 05 | Permit for foundation only |
| 06 | Repair or minor alterations |
| 07 | Demolition permit |
| 08 | Board of Appeals - Plans |
| 09 | Board of Appeals - Zoning |
| 10 | Application to issue egress certification |
| 11 | Install elevators/escalators/dumbwaiters |
| 12 | Alter elevators/escalators/dumbwaiters |
| 13 | Annual test: elevators/escalators/dumbwaiters |
| 14 | Permit to do plumbing |
| 15 | Permit to install furnaces, etc. |
| 16 | Permit to install fire extinguisher apparatus |
| 17 | Permit to do gasfitting |
| 18 | Heat, ventilation, or air conditioning |
| 19 | Permit to do electrical work |

John Bowen

Jeff Brown

June 1989

APPENDIX 3

BOUNDARY FILE DATA

## Background

This note is provides background information for the parcel boundary digitized data of East Boston for the CLUIS project. In addition, the process of preparing the boundary file in PC ARC/INFO for merger with the available attribute data is documented.

## Data Sources

The source of the data was the boundary file provided by City MIS Department. The data had been digitized by consultants as a set of lines defined by vertices in 9-digit coordinate pairs (X,Y). The original source of these points was the B.R.A. Planimetric 1" = 100' map series (circa 1965, photogrammetrically generated) modified with annotations of the most recently available parcel configurations from the City Assessing Department during the digitizing period of August 1987-June 1988. Current Assessor's sheets were used to update the maps through an annotation process so that parcel splits, consolidations, new rights-of-way, street discontinuities, street takings and new alignments would be shown at an acceptable level of accuracy. This process included photogrammetric input from the years 1980 through 1983 for water lines and street boundaries.

A second file provided parcel labels. Specifically, the land parcels defined by the lines had parcel identification numbers that were located at the center point of each parcel. A third file

contained the street name labels for the streets, with appropriate locations and orientations.

**Geographic Boundary Processing**

The digitized file was then processed in preparation for a merger with the attribute data. The 9-digit coordinates initially provided by MIS exceeded a field limitation in the INFO definition of a polygon attribute table. To remedy the problem, the boundary file was reprocessed to 6-digit accuracy. The resulting data were able to provide a sufficient level of accuracy.

The line data (EBPARLIN.XXX) had the form of a series of x, y coordinates in ASCII code. This was brought into ARC/INFO by use of the Generate command. GENERATE puts line file data into the coverage using the LINE option. A matching set of points which were Parcel IDs (EBPARLIS6.XXX) were added to the coverage, also through the Generate command, using the POINT option. Street names (STRTXT6.XXX) were added as an annotation to this existing coverage, using the ANNOTATION option.

After polygons were identified and dangling lines and other imprecisions were removed through the CLEAN process, an ARC (line) attribute table was created through the BUILD program. Then the boundary file data was ready to be merged with the attribute data. The source of the line data is more fully described in the Boston GIS draft note, from the City MIS Department.

The boundary/location file was of high quality. The 6-digit file produced parcel lines that appeared to match lines on planimetric maps. The MassGIS project of the Massachusetts

Executive Office of Environmental Affairs estimated an error (on the ground) of 50 feet at most for the lines compared to state transportation maps. The digitizing, done in 1988 by a contractor for MIS, was accurate and clean. Plotting in PC ARC/INFO produced only two lines which appeared to be inaccurate.

Andrew Foley
Simon Lewis

June 1989

## APPENDIX 4

### BUDGET SUMMARY

The CLUIS project had a total budget of $168,000 for labor and materials, including services by contractors. Expenditures began in mid-July 1988 and ended in September 1989. Total expenditures amounted to $134,764.78, leaving a budget surplus of $33,235.22. See the following summary table.

Labor, including the services of Bowen & Hayes, accounted for $94,022.02, or 70 percent of total project expenditures. Charges by Bowen & Hayes totaled $44,987.75, while BRA staff and interns accumulated labor charges totalling $49,034.27.

Materials, including computers and accessories, a plotter, and software for mapping and data base management, amounted to $36,960.26, or 27 percent of total project expenditures.

The remaining three percent of the expenditures occurred in the contingency and MIS Department categories. Technical assistance from Simon Lewis came under the contingency category. His work under the revised work program amounted to $3,250. The City of Boston's MIS Department provided services in the amount of $532.50.

In general, the $33,235.22 surplus may be explained by the BRA's purchase of computer equipment and software for less than the budgeted amounts, the BRA staff's use of fewer hours than anticipated, the absence of major contingencies, and the MIS Department's efficiency in data transferral.

Budget Summary for the East Boston CLUIS Project

| Item | Budgeted Amount | Expenditures | Balance |
|---|---|---|---|
| LABOR | | | |
| Bowen & Hayes, Inc. | $45,000.00 | $44,987.75 | $12.2 |
| BRA Staff and Interns | $59,507.00 | $49,034.27 | $10,472.7 |
| MATERIALS | | | |
| Total Materials | $45,902.00 | $36,960.26 | $8,941.7 |
| CONTINGENCY | | | |
| General | $2,779.00 | $0.00 | $2,779.0 |
| Technical Assistance: Simon Lewis | $9,812.00 | $3,250.00 | $6,562.0 |
| MIS DEPARTMENT | | | |
| Data transfer/ programming | $5,000.00 | $532.50 | $4,467.5 |
| TOTALS | $168,000.00 | $134,764.78 | $33,235.2 |

December 12, 1989

APPENDIX 5

PRINTOUTS FROM THE CLUIS SYSTEM

*** Inconsistent Land Usage - Field Survey vs Current Parcel Database

| Parcel ID | Survey Land Use | Parcel Land Use/Street | 12/07/89 Pag |
|---|---|---|---|
| 01-00036-00 | R3 | R2 | 240 PRINCETON |
| 01-00051-00 | R3 | R4 | 198 PRINCETON |
| 01-00153-00 | R3 | R4 | 265 LEXINGTON |
| Ward/Precinct/Block : 01-09-035 Count: | | | 2 |
| 01-00186-00 | C | CL | 302 PRINCETON |
| 01-00195-00 | R1 | R3 | 278 PRINCETON |
| 01-00286-00 | RC | R3 | 2 PRESCOTT |
| Ward/Precinct/Block : 01-09-040 Count: | | | 3 |
| 01-00262-00 | R3 | CN | 335 EAGLE |
| Ward/Precinct/Block : 01-09-050 Count: | | | 1 |
| 01-00274-00 | R2 | R3 | 342 PRINCETON |
| 01-00384-00 | A | R3 | 34 SHELBY |
| Ward/Precinct/Block : 01-09-045 Count: | | | 2 |
| 01-00305-00 | A | R3 | 32 SHELBY |
| 01-00330-00 | C | CL | 307 BENNINGTON |
| Ward/Precinct/Block : 01-10-015 Count: | | | 2 |
| 01-00333-00 | R2 | RC | 319 BENNINGTON |
| 01-00435-05 | E | CL | B & M RR |
| Ward/Precinct/Block : 01-10-050 Count: | | | 2 |
| 01-00464-00 | R1 | RC | 360 BENNINGTON |
| Ward/Precinct/Block : 01-13-005 Count: | | | 1 |
| 01-00470-00 | RC | R3 | 399 CHELSEA |
| 01-00473-00 | R3 | RC | 405 CHELSEA |
| 01-00475-00 | C | RC | 409 CHELSEA |
| 01-00476-00 | C | RC | 411 CHELSEA |
| 01-00529-00 | C | RC | 964 SARATOGA |
| Ward/Precinct/Block : 01-10-040 Count: | | | 5 |
| 01-00549-06 | V | C | 375 F MCCLELLAN |
| 01-00556-00 | RC | R1 | 810 SARATOGA |
| Ward/Precinct/Block : 01-13-010 Count: | | | 2 |
| 01-00564-00 | C | CL | WORDSWORTH |
| 01-00624-00 | R2 | R3 | 106 BYRON |
| Ward/Precinct/Block : 01-11-020 Count: | | | 2 |
| 01-00625-00 | R1 | R2 | 104 BYRON |
| 01-00641-00 | R1 | R2 | 48 BYRON |
| 01-00672-00 | R3 | R2 | 65 WORDSWORTH |
| 01-00743-00 | R2 | R3 | 678 SARATOGA |
| Ward/Precinct/Block : 01-11-025 Count: | | | 4 |
| 01-00834-00 | C | CL | 621 SARATOGA |
| Ward/Precinct/Block : 01-11-055 Count: | | | 1 |

| | | | | |
|---|---|---|---|---|
| 01-00918-00 | CD | A | 741 | SARATOGA |
| Ward/Precinct/Block : 01-11-070 Count: 1 | | | | |
| 01-00935-01 | CD | RL | 63 | MOORE |
| 01-00941-00 | R2 | R1 | 795 | SARATOGA |
| Ward/Precinct/Block : 01-11-040 Count: 2 | | | | |
| 01-01024-00 | R3 | R4 | 837 | SARATOGA |
| Ward/Precinct/Block : 01-11-035 Count: 1 | | | | |
| 01-01033-00 | R3 | R4 | 863 | SARATOGA |
| 01-01043-00 | R2 | R1 | 578 | BENNINGTON |
| 01-01068-00 | C | RC | 16 | TRIDENT |
| Ward/Precinct/Block : 01-11-030 Count: 3 | | | | |
| 01-01101-00 | R1 | E | 282 | BYRON |
| Ward/Precinct/Block : 01-13-020 Count: 1 | | | | |
| 01-01136-00 | R1 | RL | HOMER | |
| Ward/Precinct/Block : 01-12-130 Count: 1 | | | | |
| 01-01143-00 | R1 | R2 | 93 | MOORE |
| 01-01152-00 | C | CL | 69 | HORACE |
| 01-01194-00 | CM | RL | 48 | BAYSWATER |
| Ward/Precinct/Block : 01-11-105 Count: 3 | | | | |
| 01-01205-00 | R1 | R2 | 60 | BAYSWATER |
| 01-01209-00 | R2 | R3 | 53 | ANDREW |
| Ward/Precinct/Block : 01-12-080 Count: 2 | | | | |
| 01-01278-00 | R2 | R3 | 1129 | SARATOGA |
| Ward/Precinct/Block : 01-12-075 Count: 1 | | | | |
| 01-01431-00 | R2 | R3 | 26 | THURSTON |
| Ward/Precinct/Block : 01-12-040 Count: 1 | | | | |
| 01-01445-00 | R1 | R2 | 30 | SHAWSHEEN |
| Ward/Precinct/Block : 01-12-085 Count: 1 | | | | |
| 01-01452-00 | R2 | R3 | 146 | BAYSWATER |
| Ward/Precinct/Block : 01-12-070 Count: 1 | | | | |
| 01-01456-00 | R2 | R3 | 109 | ANDREW |
| 01-01541-00 | R2 | CM | 10 | PALERMO |
| Ward/Precinct/Block : 01-12-065 Count: 2 | | | | |
| 01-01575-00 | C | RL | 5 | VALLEY |
| Ward/Precinct/Block : 01-12-010 Count: 1 | | | | |
| 01-01585-00 | R4 | CM | 7 | BREED |
| Ward/Precinct/Block : 01-14-060 Count: 1 | | | | |

| | | | | |
|---|---|---|---|---|
| 01-01593-00 | B4 | CM | 36 | ASHLEY |
| 01-01599-00 | BC | B2 | 1 | ASHLEY |
| Ward/Precinct/Block : 01-13-035 Count: 2 | | | | |
| 01-01604-00 | B3 | B1 | 1056 | BENNINGTON |
| 01-01609-00 | A | CM | 1036 | BENNINGTON |
| 01-01628-00 | C | CL | | FORD |
| Ward/Precinct/Block : 01-13-090 Count: 3 | | | | |
| 01-01650-00 | B3 | BC | 976 | BENNINGTON |
| Ward/Precinct/Block : 01-13-030 Count: 1 | | | | |
| 01-01663-00 | C | CL | F | MCCLELLAN |
| Ward/Precinct/Block : 01-13-025 Count: 1 | | | | |
| 01-01665-00 | C | CL | F | MCCLELLAN |
| 01-01699-00 | B2 | B3 | 231 | LEYDEN |
| Ward/Precinct/Block : 01-13-005 Count: 2 | | | | |
| 01-01720-00 | A | B4 | 1 | BLACKINTON |
| 01-01748-00 | CM | BL | | WHITBY |
| Ward/Precinct/Block : 01-13-060 Count: 2 | | | | |
| 01-01766-00 | B1 | B2 | 52 | ASHLEY |
| Ward/Precinct/Block : 01-13-045 Count: 1 | | | | |
| 01-01785-00 | B2 | B1 | | ASHLEY |
| Ward/Precinct/Block : 01-13-040 Count: 1 | | | | |
| 01-01797-00 | CM | BL | 15 | LEYDEN |
| 01-01814-00 | B3 | B2 | 93 | LEYDEN |
| 01-01820-00 | B1 | B2 | 125 | LEYDEN |
| 01-01863-00 | B2 | CM | 202 | LEYDEN |
| Ward/Precinct/Block : 01-13-050 Count: 4 | | | | |
| 01-01882-00 | B2 | B3 | 186 | LEYDEN |
| 01-01883-00 | B1 | B2 | 192 | LEYDEN |
| 01-01915-00 | B2 | B3 | 90 | ORIENT |
| Ward/Precinct/Block : 01-13-065 Count: 3 | | | | |
| 01-01917-00 | B2 | B3 | 84 | ORIENT |
| 01-01928-00 | B3 | B2 | 40 | ORIENT |
| 01-01935-00 | B3 | B2 | 8 | ORIENT |
| 01-01940-00 | B2 | B3 | 17 | GLADSTONE |
| 01-01942-00 | B3 | B2 | 25 | GLADSTONE |
| 01-02036-00 | B3 | B2 | 72 | LEYDEN |
| Ward/Precinct/Block : 01-13-070 Count: 6 | | | | |
| 01-02076-00 | B2 | B1 | 223 | ORIENT |
| Ward/Precinct/Block : 01-13-085 Count: 1 | | | | |

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|---|---|---|---|---|
| 01-02099-00 | R1 | R2 | 215 | ORIENT |
| 01-02128-01 | RC | R2 | 13 | SEA VIEW |
| Ward/Precinct/Block : 01-14-020 Count: | | | 2 | |
| 01-02224-00 | R3 | R2 | 48 | WALDEMAR |
| Ward/Precinct/Block : 01-14-065 Count: | | | 1 | |
| 01-02296-00 | R2 | R1 | 144 | FAYWOOD |
| Ward/Precinct/Block : 01-14-035 Count: | | | 1 | |
| 01-02305-00 | R1 | RL | | FAYWOOD |
| 01-02306-00 | R1 | R2 | 92 | FAYWOOD |
| 01-02307-00 | R4 | CM | 88 | FAYWOOD |
| 01-02333-00 | R1 | RL | | BEACHVIEW |
| 01-02362-00 | R1 | R3 | 2 | MONTMORENCI |
| 01-02448-00 | V | C | 295 | WALDEMAR |
| Ward/Precinct/Block : 01-14-025 Count: | | | 6 | |
| 01-02511-00 | R2 | R1 | | WALDEMAR |
| 01-02525-00 | RC | R4 | 4 | PRINCETON |
| Ward/Precinct/Block : 01-14-050 Count: | | | 2 | |
| 01-02526-00 | RC | R4 | 295 | MERIDIAN |
| 01-02537-00 | R4 | R3 | 31 | LEXINGTON |
| 01-02538-00 | R4 | R2 | | LEXINGTON |
| 01-02602-00 | V | C | 5 | TRENTON |
| Ward/Precinct/Block : 01-07-030 Count: | | | 4 | |
| 01-02617-00 | R2 | R3 | 44 | LEXINGTON |
| 01-02627-00 | RC | CM | 4 | TRENTON |
| Ward/Precinct/Block : 01-07-025 Count: | | | 2 | |
| 01-02629-00 | R2 | R3 | 335 | MERIDIAN |
| 01-02640-00 | R2 | R3 | 27 | EUTAW |
| 01-02652-00 | R2 | R3 | 65 | MARION |
| 01-02657-00 | R1 | R3 | 34 | TRENTON |
| 01-02686-00 | C | RL | | MARION |
| Ward/Precinct/Block : 01-07-020 Count: | | | 5 | |
| 01-02703-00 | A | CM | 379 | MERIDIAN |
| Ward/Precinct/Block : 01-07-015 Count: | | | 1 | |
| 01-02704-00 | R3 | CM | 381 | MERIDIAN |
| 01-02705-00 | R3 | CM | 383 | MERIDIAN |
| 01-02757-00 | R2 | R3 | 38 | MONMOUTH |
| Ward/Precinct/Block : 01-08-050 Count: | | | 3 | |
| 01-02764-00 | R1 | R2 | 46 | EUTAW |
| Ward/Precinct/Block : 01-08-045 Count: | | | 1 | |

| | | | | |
|---|---|---|---|---|
| 01-02811-00 | R2 | R3 | 64 | EUTAW |
| 01-02823-00 | R2 | R1 | 98 | MARION |
| Ward/Precinct/Block : 01-07-035 Count: 2 | | | | |
| 01-02863-00 | R2 | R3 | 66 | TRENTON |
| 01-02893-00 | R1 | R2 | 124 | LEXINGTON |
| Ward/Precinct/Block : 01-07-040 Count: 2 | | | | |
| 01-02932-00 | A | CM | 119 | LEXINGTON |
| Ward/Precinct/Block : 01-07-045 Count: 1 | | | | |
| 01-02938-00 | R2 | R3 | 130 | BROOKS |
| 01-02963-00 | R1 | RL | | PRINCETON |
| 01-02971-00 | R2 | R3 | 139 | BROOKS |
| Ward/Precinct/Block : 01-07-050 Count: 3 | | | | |
| 01-02974-00 | R2 | CM | 145 | LEXINGTON |
| 01-02990-00 | R2 | R3 | 193 | LEXINGTON |
| 01-03002-00 | R1 | R3 | 172 | PRINCETON |
| 01-03069-00 | R1 | CM | 173 | BROOKS |
| Ward/Precinct/Block : 01-09-075 Count: 4 | | | | |
| 01-03097-00 | R3 | CM | 71 | PUTNAM |
| 01-03111-00 | R3 | R4 | 132 | TRENTON |
| 01-03117-00 | R2 | R3 | 122 | TRENTON |
| 01-03121-00 | R3 | CM | 114 | TRENTON |
| 01-03129-00 | A | R4 | 137 | BROOKS |
| Ward/Precinct/Block : 01-08-065 Count: 5 | | | | |
| 01-03136-00 | R2 | R1 | 79 | WHITE |
| 01-03137-00 | R2 | R1 | 81 | WHITE |
| 01-03151-00 | R3 | R4 | 163 | TRENTON |
| Ward/Precinct/Block : 01-08-060 Count: 3 | | | | |
| 01-03170-00 | R2 | R3 | 215 | TRENTON |
| 01-03212-00 | R1 | R2 | 104 | WHITE |
| Ward/Precinct/Block : 01-09-030 Count: 2 | | | | |
| 01-03247-00 | R3 | R2 | 222 | EAGLE |
| Ward/Precinct/Block : 01-09-020 Count: 1 | | | | |
| 01-03265-00 | R2 | R1 | 159 | FALCON |
| 01-03273-00 | CM | RL | | FALCON |
| 01-03274-00 | CM | RL | | FALCON |
| 01-03275-00 | R2 | R3 | 191 | FALCON |
| 01-03326-00 | V | C | 243 | CONDOR |
| Ward/Precinct/Block : 01-09-015 Count: 5 | | | | |
| 01-03357-00 | RC | R3 | 94 | FALCON |
| Ward/Precinct/Block : 01-09-010 Count: 1 | | | | |

| | | | | |
|---|---|---|---|---|
| 01-03381-00 | R4 | R3 | 82 | WHITE |
| Ward/Precinct/Block : 01-08-026 Count: 1 | | | | |
| 01-03383-00 | R1 | R3 | 98 | WHITE |
| 01-03403-00 | V | CM | 123 | FALCON |
| 01-03426-00 | R3 | R2 | 36 | WHITE |
| Ward/Precinct/Block : 01-08-055 Count: 3 | | | | |
| 01-03485-00 | R2 | R3 | 52 | EAGLE |
| Ward/Precinct/Block : 01-08-040 Count: 1 | | | | |
| 01-03527-00 | C | RL | 76 | FALCON |
| Ward/Precinct/Block : 01-08-035 Count: 1 | | | | |
| 01-03530-01 | R2 | R3 | 66 | FALCON |
| 01-03574-00 | R1 | R2 | 93 | CONDOR |
| 01-03584-00 | R3 | CM | 15 | CONDOR |
| Ward/Precinct/Block : 01-08-030 Count: 3 | | | | |
| 01-03602-00 | R3 | R2 | 436 | MERIDIAN |
| Ward/Precinct/Block : 01-08-010 Count: 1 | | | | |
| 01-03616-18 | CD | CP | 424 | MERIDIAN |
| Ward/Precinct/Block : 01-08-015 Count: 1 | | | | |
| 01-03618-00 | R3 | CM | 398 | MERIDIAN |
| 01-03619-00 | R4 | CM | 396 | MERIDIAN |
| 01-03629-00 | C | CM | 360 | MERIDIAN |
| 01-03656-00 | CM | RL | 310 | MERIDIAN |
| Ward/Precinct/Block : 01-07-006 Count: 4 | | | | |
| 01-03657-00 | CM | RL | 308 | MERIDIAN |
| 01-03658-00 | CM | CL | 306 | MERIDIAN |
| 01-03678-00 | A | RC | 400 | BORDER |
| Ward/Precinct/Block : 01-07-010 Count: 3 | | | | |
| 01-03682-00 | C | CL | 479 | MERIDIAN |
| Ward/Precinct/Block : 01-08-005 Count: 1 | | | | |
| 01-03721-00 | R2 | RC | 137 | CHELSEA |
| Ward/Precinct/Block : 01-08-025 Count: 1 | | | | |
| 01-03764-00 | A | RL | 204 | BREMEN |
| 01-03764-01 | A | RL | 202 | BREMEN |
| 01-03822-00 | R2 | R3 | 83 | CHELSEA |
| Ward/Precinct/Block : 01-05-060 Count: 3 | | | | |
| 01-03843-00 | C | RC | 105 | CHELSEA |
| 01-03883-00 | R4 | A | 31 | CHELSEA |
| Ward/Precinct/Block : 01-04-100 Count: 2 | | | | |

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01-03894-00   CM              C       150 ORLEANS

Ward/Precinct/Block : 01-03-040 Count:      1
01-03917-00   C               CL      170 MAVERICK
01-03920-02   C               CL      164 ORLEANS

Ward/Precinct/Block : 01-03-055 Count:      2
01-03921-02   C               CL   BREMEN

Ward/Precinct/Block : 01-03-050 Count:      1
01-03921-10   C               CL   BREMEN
01-03922-00   C               CL      147 ORLEANS

Ward/Precinct/Block : 01-05-080 Count:      2
01-03926-00   C               CL   ORLEANS
01-03928-00   C               CL   PORTER
01-03939-00   A               B4       70 FRANKFORT
01-03947-00   V               CM       54 FRANKFORT
01-03970-00   A               CM      141 ORLEANS

Ward/Precinct/Block : 01-02-010 Count:      5
01-03983-10   B2              B3       16 FRANKFORT
01-04001-10   B4              A       210 MAVERICK

Ward/Precinct/Block : 01-02-005 Count:      2
01-04007-00   B4              CM       62 LOBEC

Ward/Precinct/Block : 01-02-015 Count:      1
01-04016-00   A               B4       63 FRANKFORT
01-04017-00   A               B4       65 FRANKFORT
01-04018-00   A               CM       67 FRANKFORT
01-04019-00   A               B3       69 FRANKFORT
01-04046-00   A               CM      182 COTTAGE

Ward/Precinct/Block : 01-02-020 Count:      5
01-04047-00   B4              CM      174 COTTAGE
01-04050-00   RC              B4      168 COTTAGE
01-04054-00   B4              CM      160 COTTAGE
01-04056-00   B4              CM      156 COTTAGE
01-04067-00   B2              B3      121 COTTAGE

Ward/Precinct/Block : 01-02-030 Count:      5
01-04092-00   C               CL       10 GENEVA
01-04102-00   C               CL      167 COTTAGE

Ward/Precinct/Block : 01-02-025 Count:      2
01-04197-00   C               CL      413 BREMEN

Ward/Precinct/Block : 01-02-035 Count:      1
01-04274-35   V               B2       30 NEPTUNE

Ward/Precinct/Block : 01-10-055 Count:      1
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| | | | | |
|---|---|---|---|---|
| 01-04274-45 | E | RL | NEPTUNE | |
| 01-04281-10 | E | RL | MOORE | |
| 01-04282-10 | E | RL | MOORE | |
| 01-04283-10 | E | RL | MOORE | |
| 01-04285-10 | E | RL | MOORE | |
| 01-04286-10 | E | RL | MOORE | |
| 01-04287-10 | E | RL | MOORE | |
| 01-04289-10 | E | RL | MOORE | |
| 01-04296-00 | V | C | SHORT | |

Ward/Precinct/Block : 01-01-105 Count: 3

| | | | | |
|---|---|---|---|---|
| 01-04312-06 | R2 | R1 | 178 | WORDSWORTH |

Ward/Precinct/Block : 01-11-120 Count: 1

| | | | | |
|---|---|---|---|---|
| 01-04324-01 | E | R1 | 158 | WORDSWORTH |

Ward/Precinct/Block : 01-12-125 Count: 1

| | | | | |
|---|---|---|---|---|
| 01-04428-00 | R2 | R4 | 40 | JEFFRIES |

Ward/Precinct/Block : 01-12-115 Count: 1

| | | | | |
|---|---|---|---|---|
| 01-04443-00 | E | I | 264 | MARGINAL |

Ward/Precinct/Block : 01-01-075 Count: 1

| | | | | |
|---|---|---|---|---|
| 01-04445-00 | E | I | 233 | MARGINAL |
| 01-04448-00 | A | CM | 69 | MARGINAL |

Ward/Precinct/Block : 01-01-046 Count: 2

| | | | | |
|---|---|---|---|---|
| 01-04487-00 | R4 | CM | 81 | WEBSTER |

Ward/Precinct/Block : 01-03-080 Count: 1

| | | | | |
|---|---|---|---|---|
| 01-04488-00 | R3 | CM | 93 | WEBSTER |
| 01-04507-00 | CC | CL | 111 | WEBSTER |
| 01-04517-00 | R3 | CM | 116 | MARGINAL |
| 01-04533-00 | R3 | R2 | 20 | HAYNES |
| 01-04604-00 | R2 | CM | 2 | BRIGHAM |

Ward/Precinct/Block : 01-03-085 Count: 5

| | | | | |
|---|---|---|---|---|
| 01-04615-00 | V | RC | 195 | WEBSTER |

Ward/Precinct/Block : 01-01-035 Count: 1

| | | | | |
|---|---|---|---|---|
| 01-04642-00 | R3 | R2 | 1 | WEBSTER |

Ward/Precinct/Block : 01-01-030 Count: 1

| | | | | |
|---|---|---|---|---|
| 01-04654-00 | R3 | R4 | 291 | WEBSTER |
| 01-04678-00 | E | I | 260 | MARGINAL |
| 01-04686-00 | R4 | CM | 3 | MCCORMACK |

Ward/Precinct/Block : 01-01-045 Count: 3

| | | | | |
|---|---|---|---|---|
| 01-04709-00 | R4 | A | 3 | LAMSON |
| 01-04720-00 | R4 | CM | 477 | SUMNER |

*** Inconsistent Land Usage - Field Survey vs Current Parcel Database ***

Parcel ID | Survey Land Use | Parcel Land Use/Street | 12/07/89 Page : 3

| | | | |
|---|---|---|---|
| 01-04733-00 | E3 | E2 | 139 WEBSTER |
| Ward/Precinct/Block : 01-01-050 Count: 6 | | | |
| 01-04774-00 | EC | EL | 133 SUMNER |
| 01-04790-00 | E3 | E2 | 130 WEBSTER |
| 01-04791-00 | E4 | CM | 129 WEBSTER |
| 01-04806-00 | E2 | CM | 349 SUMNER |
| 01-04856-00 | E4 | R3 | 265 SUMNER |
| Ward/Precinct/Block : 01-01-015 Count: 5 | | | |
| 01-04859-00 | CM | R3 | 273 SUMNER |
| 01-04860-00 | CM | R3 | 275 SUMNER |
| 01-04861-00 | CM | R2 | 279 SUMNER |
| 01-04900-00 | C | RC | 330 SUMNER |
| Ward/Precinct/Block : 01-03-090 Count: 4 | | | |
| 01-04959-00 | EC | R1 | 70 COTTAGE |
| 01-04961-00 | E1 | CL | COTTAGE |
| Ward/Precinct/Block : 01-03-095 Count: 2 | | | |
| 01-04977-00 | E3 | R2 | 185 EVERETT |
| 01-04978-00 | E1 | R3 | 129 EVERETT |
| 01-05011-00 | E2 | CM | 408 SUMNER |
| 01-05033-00 | E3 | R4 | 59 COTTAGE |
| 01-05034-00 | E3 | R2 | 61 COTTAGE |
| 01-05035-00 | E3 | RC | 67 COTTAGE |
| 01-05039-00 | E1 | CL | COTTAGE |
| 01-05040-00 | E1 | RL | COTTAGE |
| 01-05079-00 | E3 | R2 | 241 EVERETT |
| Ward/Precinct/Block : 01-01-025 Count: 3 | | | |
| 01-05126-00 | E2 | R1 | 1 EVERETT |
| Ward/Precinct/Block : 01-01-055 Count: 1 | | | |
| 01-05157-00 | E1 | R2 | 375 MAVERICK |
| 01-05196-00 | E1 | R3 | 159 EVERETT |
| Ward/Precinct/Block : 01-01-070 Count: 2 | | | |
| 01-05197-00 | EC | R3 | 154 EVERETT |
| 01-05221-00 | A | R4 | 134 EVERETT |
| Ward/Precinct/Block : 01-01-060 Count: 5 | | | |
| 01-05224-00 | E1 | R2 | 126 EVERETT |
| 01-05228-00 | I | CL | BELMONT |
| 01-05237-00 | E3 | R4 | 92 EVERETT |
| 01-05258-00 | I | CL | MAVERICK |
| 01-05294-01 | I | CL | EVERETT |
| Ward/Precinct/Block : 01-02-055 Count: 5 | | | |
| 01-05305-00 | E | RL | 95 ORLEANS |

| | | | | |
|---|---|---|---|---|
| 01-05332-00 | B1 | BL | 98 | COTTAGE |
| 01-05333-00 | R1 | BL | 96 | COTTAGE |
| 01-05336-00 | C | CM | 159 | MAVERICK |
| Ward/Precinct/Block : 01-02-050 | | Count: | 4 | |
| 01-05347-03 | B2 | B1 | 151 | MAVERICK |
| Ward/Precinct/Block : 01-03-100 | | Count: | 1 | |
| 01-05377-00 | RC | CM | 65 | MAVERICK |
| 01-05392-00 | V | CM | 10 | ORLEANS |
| Ward/Precinct/Block : 01-03-036 | | Count: | 2 | |
| 01-05408-01 | C | CL | NEW | |
| Ward/Precinct/Block : 01-03-035 | | Count: | 1 | |
| 01-05443-00 | CM | B4 | 118 | LONDON |
| Ward/Precinct/Block : 01-04-005 | | Count: | 1 | |
| 01-05464-01 | B3 | CL | LIVERPOOL | |
| 01-05481-00 | C | CL | MERIDIAN | |
| Ward/Precinct/Block : 01-04-030 | | Count: | 2 | |
| 01-05483-00 | C | CL | MERIDIAN | |
| 01-05545-00 | B3 | R1 | 64 | LONDON |
| Ward/Precinct/Block : 01-04-065 | | Count: | 2 | |
| 01-05546-00 | R3 | B2 | 62 | LONDON |
| 01-05554-00 | RC | R1 | 56 | MAVERICK |
| 01-05605-00 | B1 | C | 71 | BORDER |
| Ward/Precinct/Block : 01-04-025 | | Count: | 3 | |
| 01-05655-00 | A | B4 | 10 | HENRY |
| Ward/Precinct/Block : 01-04-010 | | Count: | 1 | |
| 01-05661-00 | C | CL | PARIS | |
| Ward/Precinct/Block : 01-03-025 | | Count: | 1 | |
| 01-05677-00 | RC | C | 46 | MAVERICK |
| Ward/Precinct/Block : 01-03-020 | | Count: | 1 | |
| 01-05678-00 | RC | C | 1 | MERIDIAN |
| 01-05706-00 | RC | B4 | 22 | CHELSEA |
| Ward/Precinct/Block : 01-04-075 | | Count: | 2 | |
| 01-05736-00 | C | B3 | 51 | MERIDIAN |
| Ward/Precinct/Block : 01-04-080 | | Count: | 1 | |
| 01-05744-00 | A | RC | 30 | COVE |
| Ward/Precinct/Block : 01-04-060 | | Count: | 1 | |

| | | | | |
|---|---|---|---|---|
| 01-05766-00 | V | C | PORTER | |
| 01-05773-00 | A | B4 | 106 | CHELSEA |
| 01-05774-00 | A | B4 | 104 | CHELSEA |
| 01-05775-00 | A | B4 | 102 | CHELSEA |
| 01-05789-00 | B3 | BL | 6 | ANTHONY J GRIECO |
| 01-05801-00 | A | CM | 74 | CHELSEA |
| 01-05899-00 | RC | B4 | 147 | MERIDIAN |
| Ward/Precinct/Block : 01-04-090 Count: | | | 7 | |
| 01-05940-00 | C | RC | 234 | MERIDIAN |
| Ward/Precinct/Block : 01-04-035 Count: | | | 1 | |
| 01-05947-00 | C | CL | 225 | BORDER |
| 01-05948-00 | C | CL | 227 | BORDER |
| 01-05955-00 | RC | C | 2 | SARATOGA |
| Ward/Precinct/Block : 01-06-006 Count: | | | 3 | |
| 01-06016-00 | R2 | R3 | 27 | SARATOGA |
| Ward/Precinct/Block : 01-06-015 Count: | | | 1 | |
| 01-06017-00 | B4 | CM | 35 | SARATOGA |
| 01-06032-00 | RC | CM | 73 | SARATOGA |
| 01-06035-00 | V | CM | 155 | MARION |
| 01-06087-00 | C | RC | 31 | BENNINGTON |
| Ward/Precinct/Block : 01-06-020 Count: | | | 4 | |
| 01-06108-00 | B4 | R2 | 2 | APPIAN |
| Ward/Precinct/Block : 01-06-045 Count: | | | 1 | |
| 01-06127-00 | R2 | R1 | 214 | HAVRE |
| 01-06129-00 | R3 | R2 | 208 | HAVRE |
| 01-06171-00 | R2 | R3 | 207 | LONDON |
| 01-06172-00 | R2 | R1 | 1 | DAVIS |
| 01-06174-00 | V | BL | DAVIS | |
| 01-06191-00 | R3 | B4 | 139 | MARION |
| Ward/Precinct/Block : 01-06-055 Count: | | | 6 | |
| 01-06204-00 | R1 | R2 | 194 | PARIS |
| 01-06245-00 | R3 | BL | 229 | HAVRE |
| 01-06274-00 | RC | C | 158 | CHELSEA |
| Ward/Precinct/Block : 01-05-010 Count: | | | 3 | |
| 01-06275-00 | RC | C | 156 | CHELSEA |
| 01-06329-00 | RC | R3 | 213 | CHELSEA |
| Ward/Precinct/Block : 01-05-030 Count: | | | 2 | |
| 01-06340-00 | R3 | CM | 235 | CHELSEA |
| 01-06379-00 | B4 | R3 | 210 | CHELSEA |
| Ward/Precinct/Block : 01-05-065 Count: | | | 2 | |

| | | | | |
|---|---|---|---|---|
| 01-06399-00 | R4 | R3 | 21 | MORRIS |
| 01-06400-00 | R4 | R3 | 23 | MORRIS |
| 01-06403-00 | R3 | R2 | 33 | MORRIS |
| 01-06407-00 | R2 | R3 | 45 | MORRIS |
| 01-06443-00 | RC | R3 | 54 | BROOKS |

Ward/Precinct/Block : 01-05-045 Count: 5

| | | | | |
|---|---|---|---|---|
| 01-06457-00 | A | R4 | 242 | PARIS |
| 01-06458-00 | R2 | R1 | 240 | PARIS |
| 01-06509-00 | R2 | R1 | 97 | BENNINGTON |

Ward/Precinct/Block : 01-05-015 Count: 3

| | | | | |
|---|---|---|---|---|
| 01-06530-00 | R1 | R2 | 105 | SARATOGA |

Ward/Precinct/Block : 01-06-060 Count: 1

| | | | | |
|---|---|---|---|---|
| 01-06531-00 | R1 | R2 | 107 | SARATOGA |
| 01-06559-00 | R3 | R2 | 163 | SARATOGA |
| 01-06560-00 | RC | CM | 165 | SARATOGA |
| 01-06571-00 | RC | R1 | 128 | BENNINGTON |
| 01-06580-00 | R3 | RC | 98 | BENNINGTON |
| 01-06599-00 | R3 | R2 | 95 | PRINCETON |

Ward/Precinct/Block : 01-06-030 Count: 6

| | | | | |
|---|---|---|---|---|
| 01-06600-00 | R2 | R3 | 101 | PRINCETON |
| 01-06626-00 | R2 | R3 | 158 | SARATOGA |
| 01-06628-00 | R3 | R1 | 154 | SARATOGA |
| 01-06657-00 | R3 | R4 | 159 | PRINCETON |

Ward/Precinct/Block : 01-06-025 Count: 4

| | | | | |
|---|---|---|---|---|
| 01-06695-00 | F3 | R3 | 208 | SARATOGA |
| 01-06736-00 | RC | R3 | 198 | BENNINGTON |

Ward/Precinct/Block : 01-06-035 Count: 2

| | | | | |
|---|---|---|---|---|
| 01-06759-00 | C | RL | 294 | PARIS |

Ward/Precinct/Block : 01-06-040 Count: 1

| | | | | |
|---|---|---|---|---|
| 01-06766-00 | R3 | R2 | 57 | BROOKS |
| 01-06786-00 | RC | R4 | 185 | BENNINGTON |
| 01-06790-00 | R3 | R2 | 315 | PARIS |

Ward/Precinct/Block : 01-05-020 Count: 3

| | | | | |
|---|---|---|---|---|
| 01-06797-00 | R3 | RC | 333 | PARIS |
| 01-06803-00 | V | C | 102 | MORRIS |
| 01-06815-00 | R4 | R3 | 296 | CHELSEA |

Ward/Precinct/Block : 01-05-040 Count: 3

| | | | | |
|---|---|---|---|---|
| 01-06834-00 | R3 | CM | 71 | MORRIS |
| 01-06864-00 | R2 | R3 | 277 | CHELSEA |

Ward/Precinct/Block : 01-05-050 Count: 2

*** Inconsistent Land Usage - Field Survey vs Current Parcel Database ***

| Parcel ID | Survey Land Use | Parcel Land Use/Street | 12/27/89 Page : 13 |
|---|---|---|---|
| 01-06884-00 | B3 | B2 | 290 BREMEN |
| 01-06885-00 | B3 | B1 | 288 BREMEN |
| 01-06909-00 | R2 | B3 | 97 PRESCOTT |
| Ward/Precinct/Block : 01-05-070 | | Count: | 3 |
| 01-06963-00 | A | S4 | 247 BENNINGTON |
| Ward/Precinct/Block : 01-12-140 | | Count: | 1 |
| Ward/Precinct/Block : 01-12-145 | | Count: | 1 |

Parcel Count : 333

*** End of Land Use Variance Report ***

*** Historical Land Use Summary - Tax File Database ***

| Land Use | Count | Area 12/08/89 |
|---|---|---|
| A | 46 | 658.237 |
| C | 394 | 13.503.902 |
| CD | 82 | 0 |
| CL | 143 | 4.918.293 |
| CM | 8 | 93.434 |
| E | 359 | 166.405.061 |
| EA | 11 | 95.140 |
| I | 10 | 1.184.873 |
| R1 | 976 | 3.112.459 |
| R2 | 1241 | 3.758.234 |
| R3 | 2175 | 5.062.238 |
| R4 | 201 | 652.745 |
| RC | 355 | 692.796 |
| RL | 632 | 1.770.256 |
| FY '85 | 6633 | 201.907.668 |

| | | |
|---|---|---|
| A | 48 | 1.564.601 |
| C | 362 | 11.431.067 |
| CC | 2 | 0 |
| CD | 111 | 0 |
| CL | 152 | 4.253.222 |
| CM | 13 | 104.796 |
| E | 371 | 166.573.858 |
| EA | 11 | 95.140 |
| I | 25 | 3.486.234 |
| R1 | 991 | 3.052.479 |
| R2 | 1253 | 3.830.080 |
| R3 | 2156 | 5.125.059 |
| R4 | 208 | 618.713 |
| RC | 340 | 714.785 |
| RL | 623 | 1.716.169 |
| FY '86 | 6666 | 202.566.203 |

| | | |
|---|---|---|
| A | 48 | 1.594.988 |
| C | 368 | 11.572.188 |
| CC | 2 | 0 |
| CD | 193 | 0 |
| CL | 153 | 4.499.385 |
| CM | 22 | 166.789 |
| E | 385 | 166.786.297 |
| EA | 11 | 95.148 |
| I | 24 | 2.996.388 |
| R1 | 998 | 3.879.987 |
| R2 | 1266 | 3.939.247 |
| R3 | 2154 | 5.122.544 |
| R4 | 284 | 687.815 |
| RC | 348 | 718.158 |
| RL | 628 | 1.659.382 |
| | **** | |
| FY '87 | 6788 | 282.758.852 |

| | | |
|---|---|---|
| A | 47 | 1.187.721 |
| C | 326 | 18.989.474 |
| CC | 3 | 0 |
| CD | 387 | 0 |
| CL | 158 | 4.814.878 |
| CM | 48 | 263.397 |
| CP | 1 | 0 |
| E | 386 | 166.695.386 |
| EA | 11 | 95.148 |
| I | 68 | 4.213.563 |
| R1 | 398 | 3.848.978 |
| R2 | 1255 | 3.966.278 |
| R3 | 2156 | 5.153.812 |
| R4 | 286 | 622.165 |
| RC | 327 | 1.147.783 |
| RL | 628 | 1.693.964 |
| | **** | |
| FY '88 | 6893 | 283.891.379 |

*** Historical Land Use Summary - Tax File Database ***

| Land Use | Count | Area 12/08/89 |
|---|---|---|
| A | 46 | 658.237 |
| C | 334 | 13.503.902 |
| CD | 82 | 0 |
| CL | 143 | 4.918.293 |
| CM | 8 | 93.434 |
| E | 359 | 166.405.861 |
| EA | 11 | 95.140 |
| I | 10 | 1.184.873 |
| R1 | 976 | 3.112.459 |
| R2 | 1241 | 3.758.234 |
| R3 | 2175 | 5.062.238 |
| R4 | 201 | 652.745 |
| RC | 355 | 692.796 |
| RL | 632 | 1.770.256 |
| | **** | |
| FY '95 | 6633 | 201.907.668 |

| | | |
|---|---|---|
| A | 48 | 1.564.601 |
| C | 362 | 11.431.067 |
| CC | 2 | 0 |
| CD | 111 | 0 |
| CL | 152 | 4.253.222 |
| CM | 13 | 104.796 |
| E | 371 | 166.573.858 |
| EA | 11 | 95.140 |
| I | 25 | 3.486.234 |
| R1 | 991 | 3.052.479 |
| R2 | 1253 | 3.830.080 |
| R3 | 2156 | 5.125.059 |
| R4 | 208 | 618.713 |
| RC | 340 | 714.795 |
| RL | 623 | 1.716.169 |
| | **** | |
| FY '96 | 6666 | 202.566.203 |

| | | |
|---|---|---|
| A | 48 | 1.594.988 |
| C | 360 | 11.572.100 |
| CC | 2 | 0 |
| CD | 193 | 0 |
| CL | 153 | 4.499.385 |
| CM | 22 | 166.789 |
| E | 395 | 166.706.297 |
| EA | 11 | 95.140 |
| I | 24 | 2,996.388 |
| R1 | 998 | 3,079.907 |
| R2 | 1266 | 3.939.247 |
| R3 | 2154 | 5.122.544 |
| R4 | 204 | 607.815 |
| RC | 340 | 718.150 |
| RL | 620 | 1.659.382 |
| | ---- | |
| FY '87 | 6780 | 202.758.052 |

| | | |
|---|---|---|
| A | 47 | 1.187.721 |
| C | 326 | 10.989.474 |
| CC | 3 | 0 |
| CD | 307 | 0 |
| CL | 150 | 4.014.078 |
| CM | 40 | 263.997 |
| CP | 1 | 0 |
| E | 386 | 166.695.306 |
| EA | 11 | 95.140 |
| I | 60 | 4.213.563 |
| R1 | 998 | 3.048.978 |
| R2 | 1255 | 3.966.278 |
| R3 | 2156 | 5.153.012 |
| R4 | 206 | 622.165 |
| RC | 327 | 1.147.703 |
| RL | 620 | 1.693.964 |
| | ---- | |
| FY '88 | 6893 | 203.091.379 |

Table 11. Parking Spaces in East Boston by Precinct, Sept. 1988

| Precinct | Parcels with pkg | % Total | # Spaces | % Total | Mean spaces/parcel |
|---|---|---|---|---|---|
| 1 | 38 | 7.1 | 278 | 4.1 | 7.3 |
| 2 | 29 | 5.4 | 1,203 | 17.9 | 41.5 |
| 3 | 44 | 8.2 | 629 | 9.4 | 14.3 |
| 4 | 35 | 6.6 | 411 | 6.1 | 11.7 |
| 5 | 39 | 7.3 | 576 | 8.6 | 14.8 |
| 6 | 20 | 3.7 | 232 | 3.4 | 11.6 |
| 7 | 12 | 2.2 | 148 | 2.2 | 12.3 |
| 8 | 29 | 5.4 | 98 | 1.5 | 3.4 |
| 9 | 17 | 3.2 | 82 | 1.2 | 4.8 |
| 10 | 23 | 4.3 | 583 | 8.7 | 25.3 |
| 11 | 21 | 3.9 | 243 | 3.6 | 11.6 |
| 12 | 78 | 14.6 | 627 | 9.3 | 8.0 |
| 13 | 98 | 18.4 | 1,512 | 22.5 | 15.4 |
| 14 | 51 | 9.6 | 104 | 1.5 | 2.0 |
| Total | 534 | 100.0 | 6,726 | 100.0 | 12.6 |

Source: CLUIS.

AIRPORT-RELATED BUSINESSES
CLUIS PROJECT
EAST BOSTON SEPTEMBER 1988

| STNO | STREET NAME | OWNER | LANDUSE | BUSINESSES ON PARCEL OR COMMENTS | | |
|---|---|---|---|---|---|---|
| 355 | BENNINGTON | DESANCTIS LOUIS | C | RELIABLE AIR FREIGHT | KAMINO AIR TRANSPORT | BRUNING INT'L CORP |
| 661 | BENNINGTON | SHUEL JAMES J | C | JIM'S AUTO SHOP | | |
| 57 | BOARDMAN | DESTEFANO JOHN ETAL | V | BOSTON BREAK BULK | SHIPPING | |
| 162 | BOARDMAN | GROSSMAN LOUIS J TRSTS | C | AVIS RENT A CAR | attention:block name + # don't match! | |
| 374 | BORDER | GENESIS SHIP CORP MASS CORP | V | parking | | |
| 125 | BREMEN | DESANCTIS LOUIS R | C | THRIFTY RENT-A-CAR | | |
| 135 | BREMEN | DESANCTIS LOUIS R | C | THRIFTY RENT-A-CAR | | |
| 215 | BREMEN | CIAMPA REALTY CORP | C | SCOLLY BONDED WAREH. | HELLMANN AIR FREIGHT | |
| 219 | BREMEN | GOLDBERG RICHARD TRST | C | PARK N' FLY | | |
| 223 | BREMEN | GOLDBERG RICHARD TRST | C | same as 219 Bremen | | |
| 332 | BREMEN | SCOLLY ROBERT A TRSTS | C | MARIO'S AUTO SERVICE | EDEN AIR | LAD FREIGHT |
| 372 | BREMEN | DEMARCO RHONDA M | RC | AIRPORT AUTO | | |
| 413 | BREMEN | DESANCTIS LOUIS | C | LABELL'S AIRPORT PAR KING | | |
| 452 | BREMEN | ROSATTO, JAMES | C | JET EXPEDITING | | |
| 365 | CHELSEA | HEIMANN RONALD W | C | SAFE SYSTEM | MAX GRUENHUT INT'L | |
| 434 | CHELSEA | DONATI ARMAND J | RC | US BROKER INC. | J&J EXPRESS | |
| 167 | COTTAGE | PORT DEVELOPMENT CO INC | C | AMERICAN INT'L | | |
| 2 | EAGLE | DONATI ARMAND | C | ADCI INC. | AIRLINE FREIGHT SERV | EAGLE SQ. TRAVEL |
| 5 | GENEVA | DINUSH JOSEPH * MARY BE | C | AI-Service garage | | |
| 7 | GENEVA | DINUSH JOSEPH * MARY BE | C | AI-see 5 Geneva | | |
| 9 | GENEVA | DINUSH JOSEPH * MARY BE | C | AI- see 5 Geneva | | |
| 10 | GENEVA | YEBBA NICHOLAS A TRST | C | AMERICAN INT'L | | |
| 28 | GENEVA | DELUCA ANTHONY F ETAL | C | DELUXE LIMOSINE SER. | | |
| 293 | MARGINAL | AMPS CORP LESSEE | V | | | |

AIRPORT-RELATED BUSINESSES
CLUIS PROJECT
EAST BOSTON SEPTEMBER 1988

| STNO | STREET NAME | OWNER | LANDUSE | BUSINESSES ON PARCEL OR COMMENTS | | |
|---|---|---|---|---|---|---|
| 281 | MAVERICK | CORREALE RALPH ETAL | C | LONG TERM PARKING | LOT | |
| 320 | MAVERICK | CIFUNI PompELIA | C | SENTINAL CAR SERVICE | | |
| 6 | NEW | HINTLIAN DERAN S TRST | C | PILOT AIR FREIGHT | | |
| 147 | ORLEANS | YEBBA NICHOLAS A TS | C | AMERICAN INT'L | | |
| 155 | ORLEANS | YEBBA NICHOLAS A TS | C | AI-see 147 Orl. | | |
| 161 | ORLEANS | YEBBA NICHOLAS A TRST | C | AI-see 147 Orl. | | |
| 164 | ORLEANS | YEBBA NICHOLAS A TRST | C | AMERICAN INT'L | | |
| 171 | ORLEANS | YEBBA NICHOLAS A TS | C | AI-see 147 Orl | | |
| 175 | ORLEANS | YEBBA NICHOLAS A TS | C | AI-see 147 Orl. | | |
| 255 | ORLEANS | LEVIN DANIEL TRSTS | V | | | |
| 97 | PORTER | MABARDY JOSEPH JR TRST | C | USA RENT-A-CAR_ | | |
| 153 | PORTER | YEBBA NICHOLAS A TRST | C | AJAX RENT-A-CAR | | |
| 201 | PORTER | PORT DEVELOPMENT CO | C | AMERICAN INT'L | | |
| 161 | PRESCOTT | R S R REALTY COMPANY | C | contains 15 business es / refer to master sheets | | |
| 830 | SARATOGA | INTNATL ASSOC MACHINISTS | C | AIR TRANSPORT AND | LOCAL LODGE | |
| 246 | SUMNER | ANNOB REALTY COMPANY INC | C | DOLLAR RENT-A-CAR | EXEC. OFFICE | |
| 346 | SUMNER | CAPONE EDA | RC | PERFECT SELECTION | GIFT STORE_____ | ALL FREIGHT INT'L |
| 200 | WM F MCCLELLAN | DESIMONE STEPHEN T TRSTS | C | BURLINGTON AIR EXPRE | SS | |
| 220 | WM F MCCLELLAN | LANDANO ALFRED W TRSTS | C | KUEHNE +NAGLE SHIPPI | NG | |
| 240 | WM F MCCLELLAN | GROSSMAN LOUIS J TRSTS | I | AVIS RENT A CAR | | |
| 240 | WM F MCCLELLAN | GROSSMAN BERNARD D TRSTS | C | AVIS RENT A CAR | | |
| 285 | WM F MCCLELLAN | ANNOB RLTY CO INC | C | DOLLAR RENT A CAR | AUTO SALES | |

AIRPORT-RELATED BUSINESSES
CLUIS PROJECT
EAST BOSTON SEPTEMBER 1988

| STNO | STREET NAME | OWNER | LANDUSE | BUSINESSES ON PARCEL OR COMMENTS | | |
|---|---|---|---|---|---|---|
| 310 | WM F MCCLELLAN | GROSSMAN DEVELOPMENT PROP | C | AVIS RENT A CAR | | |
| 310 | WM F MCCLELLAN | WIENER MAURICE TRSTS | C | YELLOW CAB | PROFIT FREIGHT SYSTE MS | |
| 340 | WM F MCCLELLAN | GROSSMAN BERNARD D TRSTS | C | AVIS RENT A CAR | | |
| 350 | WM F MCCLELLAN | AUTO CITY INC | C | PARK AND FLY | | |
| 420 | WM F MCCLELLAN | AUTO CITY INC | C | PARK AND FLY | | |
| 440 | WM F MCCLELLAN | HERTZ RLTY CORP | C | LOGAN INDUSTRIAL | PARK EAST RYDER | AIR CARGO CORP. |
| 440 | WM F MCCLELLAN | GIBBS HENRY T TRSTS | V | LOGAN INDUSTRIAL | PARK EAST RYDER | AIR CARGO CORP. |
| 440 | WM F MCCLELLAN | ABATE SABATINO TRST | C | LOGAN INDUSTRIAL | PARK EAST RYDER | AIR CARGO CORP. |
| 440 | WM F MCCLELLAN | LOPRESTI VINCENT A ETAL | V | LOGAN INDUSTRIAL | PARK EAST RYDER | AIR CARGO CORP |

Parcel Report with Fire Department
Information by Street Name

| Parcel Id | Address | Land Use | Square Footage | Owner Occupied | Owner | Fire Date | Estimated Loss |
|---|---|---|---|---|---|---|---|
| ** Street Name ADDISON | | | | | | | |
| 01-00610-00 | 143 ADDISON | C | 8,100 | | BARRY JOSEPH T | 02/20/88 | 12,000 |
| ** Street Name ANDREW | | | | | | | |
| 01-01449-00 | 101 ANDREW | R2 | 4,275 | Y | LOMBARDI ALBERT A SR ETAL | 01/16/86 | 500 |
| 01-01501-00 | 150 ANDREW | R2 | 3,600 | Y | DISCISCIO RONALD L ETAL | 06/21/86 | 10,000 |
| 01-01497-00 | 158 ANDREW | R1 | 5,400 | Y | BELLUSCI LOUISE | 04/21/86 | 1,000 |
| ** Street Name APPIAN | | | | | | | |
| 01-06108-00 | 2 APPIAN | R2 | 760 | N | CAVARRETTA JOSEPH J | 07/11/88 | 200 |
| ** Street Name ASHLEY | | | | | | | |
| 01-01593-00 | 36 ASHLEY | CM | 3,060 | | MADONNA HILL CONDO TR | 05/08/86 | 200,000 |
| ** Street Name BENNINGTON | | | | | | | |
| 01-06520-00 | 119 BENNINGTON | RC | 951 | | ROBERTO RITA M ETAL | 01/19/86 | 200 |
| 01-06568-00 | 138 BENNINGTON | RC | 1,851 | | SCIARAFFA ROCCO A ETAL | 06/18/86 | 1,000 |
| 01-00056-00 | 254 BENNINGTON | RC | 1,250 | | TAVELLA ANGELA M TRST | 01/20/87 | 200,000 |
| 01-00858-00 | 553 BENNINGTON | R2 | 3,750 | Y | HANKARD MARGARET E | 04/25/88 | 800 |
| ** Street Name BLACKINTON | | | | | | | |
| 01-01681-00 | BLACKINTON | E | 58,845 | | CITY OF BOSTON | 07/24/86 | 300 |
| ** Street Name BORDER | | | | | | | |
| 01-03679-00 | BORDER | E | 453,000 | | CITY OF BOSTON | 07/23/87 | 3,000 |
| 01-05425-00 | 139 BORDER | C | 3,313 | | SHULMAN ROBERT TRST | 12/26/86 | 15,000 |
| 01-05925-00 | 184 BORDER | C | 275,846 | | LIBERTY PLAZA RLTY INC | 10/14/87 | 125,000 |
| 01-03678-00 | 408 BORDER | RC | 447,883 | | EAST BOSTON SHORE PLAZA LPS | 01/11/87 | 2,000 |
| ** Street Name BREMEN | | | | | | | |
| 01-03918-01 | BREMEN | CL | 2,290 | | CONSOLIDATED RAIL CORP | 02/07/87 | 20,000 |
| 01-06910-00 | 350 BREMEN | R2 | 1,875 | N | ROBERTO LOUIS J ETAL | 04/09/87 | 500 |
| ** Street Name BROOKS | | | | | | | |
| 01-03384-00 | BROOKS | E | 220,875 | | CITY OF BOSTON | 09/27/86 | 500 |
| 01-06566-00 | 74 BROOKS | RC | 1,322 | | FRIZZI CONO TRST | 04/22/86 | 150,000 |
| 01-03014-00 | 149 BROOKS | R3 | 1,760 | N | PASSANISI OTTAVIO | 12/17/87 | 500 |
| ** Street Name C KELLY | | | | | | | |
| 01-05910-00 | 14 C KELLY | RC | 1,049 | | DIPIETRO LEONARD | 02/22/86 | 1,000 |
| ** Street Name CHELSEA | | | | | | | |
| 01-03884-00 | 33 CHELSEA | R4 | 1,633 | | BOOSE RONALD RAY | 11/20/87 | 1,500 |
| 01-03889-00 | 43 CHELSEA | R4 | 1,545 | | CONLEY FREDERICK J JR | 06/04/86 | 15,000 |
| 01-03783-00 | 111 CHELSEA | RC | 3,989 | | GRANITE CASTLE INC | 11/23/86 | 5,000 |
| 01-06321-00 | 197 CHELSEA | RC | 1,328 | | FAVALORO JOSEPH M | 05/12/87 | 3,000 |
| 01-06329-00 | 213 CHELSEA | R3 | 2,240 | N | SPITALERI NICHOLAS ETAL | 01/11/86 | 150,000 |
| 01-06813-00 | 300 CHELSEA | R3 | 1,750 | N | ROSA FRANK J | 01/24/86 | 2,000 |
| 01-00315-00 | 343 CHELSEA | C | 2,500 | | SCHIRRIPA FRANK TS | 06/29/87 | 300 |

Parcel Report with Fire Department
Information by Street Name

| Parcel Id | Address | Land Use | Square Footage | Owner Occupied | Owner | Fire Date | Estimated Loss |
|---|---|---|---|---|---|---|---|
| 01-00083-00 | 378 CHELSEA | RC | 2,069 | | VITAGLIANO WILLIAM M | 04/19/88 | 10,000 |
| ** Street Name COLERIDGE | | | | | | | |
| 01-04300-00 | 149 COLERIDGE | R3 | 63,941 | Y | SEARLE ELLSWORTH H ETAL | 01/27/86 | 1,000 |
| ** Street Name COTTAGE | | | | | | | |
| 01-04055-00 | 158 COTTAGE | RC | 2,106 | | VAUGHAN ANTHONY J | 04/18/86 | 300 |
| 01-04044-00 | 186 COTTAGE | EA | 2,384 | | EAST BOS COMMUNTY ASSO LPS | 06/17/88 | 20,000 |
| ** Street Name COWPER | | | | | | | |
| 01-04318-00 | 176 COWPER | R2 | 3,000 | N | GIARDULLO GENNARO V | 05/27/87 | 600 |
| ** Street Name DEER ISLAND | | | | | | | |
| 01-07063-00 | DEER ISLAND | E | 4,268,880 | | COMM OF MASS | 05/20/87 | 1,500 |
| ** Street Name EAGLE | | | | | | | |
| 01-03448-00 | 39 EAGLE | R3 | 3,251 | N | SCIASCIA CHARLES R TS | 12/20/87 | 2,500 |
| 01-03711-03 | 338 EAGLE | E | 290,608 | | MASS BAY TRANSP AUTH | 12/06/86 | 200 |
| ** Street Name EDWARD | | | | | | | |
| 01-01320-00 | 35 EDWARD | R3 | 4,250 | Y | BATTAGLIA LENA ETAL | 04/04/86 | 7,500 |
| ** Street Name EUTAW | | | | | | | |
| 01-02671-00 | 20 EUTAW | RC | 6,397 | | REARDON JEREMIAH TS | 07/09/86 | 100 |
| 01-02643-00 | 33 EUTAW | R2 | 2,500 | Y | CONWAY JOHN J JR | 11/06/87 | 10,000 |
| 01-03145-00 | 108 EUTAW | R1 | 1,325 | Y | FEOLA RAYMOND H ETAL | 01/11/87 | 3,000 |
| ** Street Name F MCCLELLAN | | | | | | | |
| 01-01666-10 | 310 F MCCLELLAN | C | 46,479 | | GROSSMAN MORTON TS | 04/03/88 | 300 |
| ** Street Name FALCON | | | | | | | |
| 01-03357-00 | 84 FALCON | R3 | 2,188 | N | STOLL RONALD C ETAL | 05/10/88 | 1,000 |
| ** Street Name HAVRE | | | | | | | |
| 01-06247-00 | 239 HAVRE | R3 | 900 | N | FRIZZI CONO TRSTS | 01/25/86 | 500 |
| 01-06483-00 | 295 HAVRE | R3 | 2,500 | N | QUARATO MARIA | 10/24/86 | 500 |
| 01-06484-00 | 297 HAVRE | RC | 2,500 | | MOSCARITOLO NICHOLAS J ETAL | 06/25/88 | 15,000 |
| ** Street Name LEXINGTON | | | | | | | |
| 01-00231-00 | 2 LEXINGTON | R1 | 995 | N | CONSOLE ANGELO A ETAL | 09/02/87 | 40,000 |
| 01-03062-00 | 144 LEXINGTON | R3 | 2,000 | Y | RADDI GAETANO ETAL | 04/13/87 | 53,000 |
| ** Street Name LIVERPOOL | | | | | | | |
| 01-05462-00 | 151 LIVERPOOL | C | 9,720 | | DEMARCO NATALE | 08/20/86 | 1,000 |
| ** Street Name LONDON | | | | | | | |
| 01-05451-00 | 102 LONDON | R3 | 1,600 | Y | PACITTO FRANK J TRST | 06/09/87 | 100 |

Parcel Report with Fire Department
Information by Street Name

| Parcel Id | Address | Land Use | Square Footage | Owner Occupied | Owner | Fire Date | Estimated Loss |
|---|---|---|---|---|---|---|---|
| ** Street Name LUBEC | | | | | | | |
| 01-04025-00 | 59 LUBEC | R4 | 2,740 | | DELVECCHIO EMILIO ETAL | 02/03/87 | 500 |
| 01-04029-00 | 67 LUBEC | C | 3,145 | | VIGLIOTTA ANGELO | 01/25/87 | 500 |
| 01-04030-00 | 69 LUBEC | RL | 3,145 | N | BARISANO MODESTINO ETAL | 01/05/86 | 126,000 |
| ** Street Name MARGINAL | | | | | | | |
| 01-04678-00 | 260 MARGINAL | I | 73,470 | | CASHMAN MARINE ENTERPRISES | 08/13/87 | 10,000 |
| ** Street Name MARION | | | | | | | |
| 01-02610-00 | 79 MARION | R2 | 1,495 | N | RUBBICO ELAINE | 03/30/88 | 300 |
| 01-06426-00 | 218 MARION | E | 26,000 | | CITY OF BOSTON | 06/08/88 | 100 |
| 01-06390-00 | 234 MARION | R3 | 1,300 | Y | ANTONUCCIO ROY J ETAL | 10/02/87 | 1,000 |
| ** Street Name MAVERICK | | | | | | | |
| 01-04126-00 | MAVERICK | E | 1,596,835 | | MASS PORT AUTHORTY | 03/19/87 | 100 |
| 01-05514-00 | MAVERICK | E | 10,460 | | ROMAN CATH ARCH OF BOS | 09/02/87 | 400 |
| 01-05609-00 | MAVERICK | E | 355,500 | | CITY OF BOSTON | 01/02/87 | 100 |
| 01-05368-06 | 25 MAVERICK | CD | 681 | N | NARDELLI ANTONIO TRST | 01/11/88 | 6,000 |
| 01-03915-00 | 174 MAVERICK | RC | 810 | | FAZZOLARI PASQUALE ETAL | 02/03/86 | 2,000 |
| ** Street Name MERIDIAN | | | | | | | |
| 01-05737-00 | 59 MERIDIAN | C | 4,681 | | SCHIRRIPA FRANCESCO TRSTS | 10/23/87 | 30,000 |
| 01-05469-00 | 100 MERIDIAN | RC | 2,500 | | PAONE HENRY R TRST | 04/11/87 | 2,500 |
| 01-05897-00 | 137 MERIDIAN | RC | 1,399 | | TORLONE ROSEMARIE TRST | 11/25/86 | 25 |
| 01-05931-00 | 294 MERIDIAN | R1 | 1,690 | Y | DITOMASO NICHOLAS & HAZEL BE | 10/13/87 | 300 |
| 01-02703-00 | 379 MERIDIAN | CM | 1,800 | | THREE 79 MERIDIAN STREET | 06/17/87 | 200 |
| 01-02705-00 | 383 MERIDIAN | CM | 1,419 | | THREE 83 MERIDIAN CONDO TR | 01/27/87 | 3,000 |
| ** Street Name MURRAY | | | | | | | |
| 01-04841-00 | 5 MURRAY | R1 | 670 | Y | INGEMI DIANE | 09/07/86 | 500 |
| ** Street Name NEW PICKERTS | | | | | | | |
| 01-05409-00 | NEW PICKERTS | CL | 52,098 | | HINTLIAN ANN TRST | 10/06/86 | 100 |
| ** Street Name ORLEANS | | | | | | | |
| 01-04855-00 | 45 ORLEANS | RC | 1,856 | | CIARAMITARO PAULINE M | 05/28/86 | 15,000 |
| 01-05343-00 | 78 ORLEANS | A | 4,000 | | CAPONE ALBERT ETAL | 03/28/88 | 15,000 |
| ** Street Name PORTER | | | | | | | |
| 01-05767-00 | 115 PORTER | RC | 2,261 | | ASSAD E RICHARD TRST | 06/11/86 | 3,000 |
| ** Street Name PRESCOTT | | | | | | | |
| 01-00348-00 | 98 PRESCOTT | C | 3,750 | | SMITH JOHN L | 07/08/86 | 2,500 |
| ** Street Name PRINCETON | | | | | | | |
| 01-02578-00 | 44 PRINCETON | R1 | 2,800 | N | SMITH CHARLES L | 01/12/87 | 3,000 |
| 01-02576-00 | 48 PRINCETON | R3 | 3,333 | N | CATTANEO RALPH ETAL | 09/04/86 | 2,000 |

Parcel Report with Fire Department
Information by Street Name

| Parcel Id | Address | Land Use | Square Footage | Owner Occupied | Owner | Fire Date | Estimated Loss |
|---|---|---|---|---|---|---|---|
| ** Street Name RICE | | | | | | | |
| 01-04387-03 | RICE | C | 0 | | EAST BOSTON YACHT BLUB | 03/31/86 | 40,000 |
| ** Street Name SARATOGA | | | | | | | |
| 01-06697-00 | 204 SARATOGA | R3 | 950 | N | BELLABONA LEO F ETAL | 07/15/88 | 1,300 |
| 01-07051-00 | 312 SARATOGA | R3 | 2,500 | N | COLUCCI GERARDO V ETAL | 09/09/86 | 400 |
| 01-00481-00 | 491 SARATOGA | C | 14,479 | | DILIBERO NICOLA R | 01/17/86 | 25,000 |
| 01-00532-00 | 956 SARATOGA | E | 5,796 | | ORIENT HGTS CIVIC CLUB | 07/13/87 | 3,500 |
| 01-00529-00 | 964 SARATOGA | RC | 3,964 | | CHANCE STEPHEN G ETAL | 12/02/86 | 25,000 |
| 01-01623-00 | 978 SARATOGA | C | 3,295 | | TESCIONE LINDORO CAND | 09/26/86 | 1,000 |
| 01-01622-00 | 980 SARATOGA | RC | 3,147 | | HOCKLEY RESTAURANT & LOUNGE | 09/16/87 | 10,000 |
| 01-01238-00 | 1053 SARATOGA | R3 | 2,969 | N | FINA GAETANO ETAL | 03/03/87 | 125 |
| 01-01249-00 | 1085 SARATOGA | R2 | 4,500 | Y | BARBARO GIUSEPPE ETAL | 05/24/88 | 3,000 |
| ** Street Name SHELBY | | | | | | | |
| 01-00177-00 | 5 SHELBY | R3 | 2,087 | N | CORREIA ANTONIO J ETAL | 04/20/87 | 1,500 |
| ** Street Name SUMNER | | | | | | | |
| 01-05403-00 | 99 SUMNER | I | 144,203 | | WOODWARD CYNTHIA L | 05/15/86 | 1,000 |
| 01-04858-00 | 271 SUMNER | CM | 1,176 | | ATLANTIC EAST ONE CONDO TR | 03/09/87 | 200 |
| 01-04860-00 | 275 SUMNER | R3 | 1,176 | N | TAVARES MANUEL | 02/19/87 | 600,000 |
| 01-04785-00 | 403 SUMNER | EA | 12,500 | | EAST BOS COMMONTY ASSO LPS | 02/01/87 | 75,000 |
| 01-04714-00 | 463 SUMNER | R3 | 1,914 | N | BUONOPANE ANGELO ETAL | 03/31/87 | 1,000 |
| ** Street Name TRENTON | | | | | | | |
| 01-02885-00 | 101 TRENTON | R3 | 1,625 | N | CUNNINGHAM JOHN | 07/14/88 | 3,000 |
| 01-03020-00 | 115 TRENTON | R3 | 2,500 | Y | SORRENTO JO ANN ETAL | 08/29/87 | 50,000 |
| 01-03163-00 | 195 TRENTON | R3 | 2,350 | Y | FINCH ROBERT J | 09/13/86 | 500 |
| 01-03168-00 | 211 TRENTON | R2 | 1,082 | Y | BARONE VINCENT P | 04/21/87 | 300 |
| 01-00212-00 | 233 TRENTON | R1 | 2,500 | N | BYRNE ELAINE | 06/04/87 | 200 |
| ** Street Name VALDEMAR | | | | | | | |
| 01-02524-00 | 111 VALDEMAR | C | 4,873,731 | | BELLE ISLE LP MASS PT | 02/01/86 | 5,000 |
| 01-02280-00 | 250 VALDEMAR | E | 653,763 | | CITY OF BOSTON | 08/07/86 | 300 |
| ** Street Name WEBSTER | | | | | | | |
| 01-04486-00 | 59 WEBSTER | R4 | 1,120 | | MEAD EDGAR THORN III | 09/05/87 | 50,000 |
| 01-04505-00 | 99 WEBSTER | R3 | 1,938 | N | DAVIS THOMAS L | 08/23/88 | 10,000 |
| 01-04819-00 | 100 WEBSTER | A | 5,625 | | DAVOLIO MICHAEL P TRST | 06/22/86 | 7,000 |
| 01-04547-00 | 131 WEBSTER | R1 | 3,450 | N | LIBERTI FERMINIA | 06/03/86 | 10,000 |
| ** Street Name WORDSWORTH | | | | | | | |
| 01-00563-00 | 86 WORDSWORTH | R1 | 2,500 | N | MAINERO LEAH | 07/02/87 | 1,000 |

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